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The Excavations at Ur, 1923-1924

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I. *Introductory*

I HAVE already described (*Antiquaries Journal*, iv, 329-46) the work carried out at Tell el Obeid during the winter of 1923-4 by the Joint Expedition of the British Museum and the Museum of the University of Pennsylvania: here I shall deal with what was really the major operation of the season, the clearing of the Ziggurat at Ur itself. Upon this site from 120 to 200 workmen were employed continuously for four and a half months, first under the supervision of Messrs. Gadd and Fitz-Gerald, later under that of the whole staff. Khalil of Jerablus was native foreman at Ur while the Tell el Obeid excavations were in progress, and after they were shut down Hamoudi took over the head control of the entire gang; Yahia, Hamoudi's son, acted as clerk on the work and is responsible for a great deal of the photographic work. All the plans and drawings are by Mr. F. G. Newton.

Every important city of ancient Mesopotamia boasted a ziggurat or staged tower; of them all, the tower of Babylon is the most famous, thanks chiefly to the story in Genesis and to the description given by Herodotus; and that of Ur is the best preserved. All of them have suffered severely, first at the hands of iconoclasts, afterwards at the hands of the natives who for thousands of years have used their outstanding bulk as quarries for building-bricks, with the result that their original appearance has been largely a matter of conjecture; now for the first time we are able

to put forward a tolerably certain restoration of a ziggurat as it was.¹

The ziggurat of Ur, which we can take as a type, was a rectangular structure whose base measurements were 65.0 metres by 43.0 metres, the angles orientated to the cardinal points of the compass; it was of brick, the only available material, and was solid throughout, the core being of unburnt mud brick and the facing of kiln-baked brick; the walls had a marked inward batter. It was built in stages which diminished in area upwards, the bottom stage being 9.75 metres high, the second, third, and fourth only 2.50, 2.30, and 4.00 metres high respectively; they were also curiously irregular, there being four stages at the SE. end and only three at the NW.; and the decrease in area was not uniform, the upper stages being much shorter in proportion to their width than the lowest, so that while there were left broad terraces at either end of the lowest platform, there were but narrow promenades along its sides. In the middle of the top platform there was a small temple, now completely ruined; this was the one element in the whole structure that was not solid throughout.

So far the description of the ziggurat might seem to apply equally to the stepped pyramid of Egypt, in that both are rectangular, both have battered sides, and both are built up in diminishing stages so as to present the aspect of a pyramid with stepped sides; but here the resemblance stops. In the first place, the idea of the two is completely different; the Egyptian pyramid conceals a tomb chamber in its interior, the ziggurat gives prominence to a temple crowning its solid mass. In the second place, the stepped pyramid represents merely a phase, a more or less accidental phase, in the evolution of the true pyramid with pointed top and smooth inaccessible sides; an essential feature of the ziggurat is the stairway which gives access to the stage-platforms and to the temple. A much closer parallel is afforded by the teocallis of Mexico.

Essentially the ziggurat is an artificial hill. The type originates, apparently, with the Sumerians, who, coming from a hill country into the flat alluvial plains of Mesopotamia, found themselves at a loss how to worship their gods after the manner of their forefathers. These gods were, generally speaking, mountain deities—this is what is to be expected of a mountain people, and in fact throughout all Babylonian history it is common to find the gods represented as standing or throned upon

¹ This is no disparagement of the work done by Koldewey, Dombart, and others; but those writers had insufficient data and their restorations therefore were necessarily conjectural.

rocky hills; therefore the right place for their shrines was upon the heights, and since Babylonia afforded none such, it is hardly strange that a pious-minded folk should set to work to repair the omissions of nature and build hills where none existed. And it was almost inevitable that the simple idea of a hill with which the building originated should soon be complicated by a secondary and more symbolical idea. The artificial mound so laboriously constructed is not merely a hill, else were their labour lost that built it; it is God's Hill, sanctified from its conception as the seat and throne of the city's god, and since the god's seat is in heaven and the earthly temple that crowns the ziggurat is but the reflection of his celestial house, the mound itself becomes a symbol of the heavens; consequently it should in everything, in architectural line and in colour, correspond to what is known of heaven, to the order and nature of the celestial spheres.

In the low-lying Valley of the Two Rivers where the ground was sodden with water filtering from the many irrigation-canals, and periodically floods drowned the fields, any permanent building had to be raised above the level of the plain, and we have plenty of records and remains of the terraces whereon kings set their palaces, great walled terraces of earth and brick which, originally but a precaution against damp, became later a means of glorifying the king's majesty by adding height and pride to his dwelling. But the ziggurat is not to be ranked with these terraced buildings; though the existence of such might have encouraged the Sumerians to put into practice their idea of making a mountain, the mountain remains quite other than the terrace; not only by its towering bulk but also by the hieratic ordering of its parts does it stand alone. Moreover, the ziggurat no less than the palace may itself be set upon a terrace, so that the true comparison, or contrast, is not between the temple built on its ziggurat and the palace built on its terrace, but between the ziggurat with all its stages and its temple complete, and the simple palace. The contrast is clear enough to-day to any one who on a Sumerian site sees the ruins of the ziggurat dwarfing all the mounds of the city; that it was no less real to the Sumerians themselves is shown by some of the names given to the towers—'The House of the Mountain', 'The Link between Earth and Heaven', 'The Holy Hill', 'The House of the Mountain of all Lands'.

The first excavations at Ur were carried out in 1857 by Taylor, acting on behalf of the Trustees of the British Museum, and a great deal of his work was done on the site of the ziggurat. He attacked the mound from the top, cutting a trench right

across the middle from front to back in the hope, probably, of discovering a chamber in the interior, but found only solid brick construction, and he pulled down the corners of the upper stories, which at that time must have been well preserved, and brought to light the foundation-cylinders put there by Nabonidus when he restored the tower. Unfortunately Taylor's records are very jejune, and apart from the fact that he found a brick staircase somewhere or other on the monument there is little to be learnt from them; so far as the restoration of the ziggurat is concerned we can only deplore the damage which inevitably resulted from the treasure-hunting methods of archaeology fifty years ago. On the other hand, Taylor's cylinders are full of information about the history of the ziggurat, and it was no little help to have this information at our disposal before starting our own work on the site; we knew before digging began that the original building was put up by King Ur-Engur (Ur-Nammu) and his son Dungi (Shulgi) (2300-2200 B.C.), and was apparently left unfinished by them and not completed by any subsequent king until the time of Nabonidus (555-538 B.C.), and that Nabonidus restored the tower and added the temple on its summit in honour of the Moon god of Ur.

In the spring of 1919 Dr. H. R. Hall had cleared down to its foundation part of one end (the SE. end) of the ziggurat, proving that the wall of the lowest stage was well preserved; in front of the base he found a brick drain, and against the NE. side, at the east corner, he found what seemed to be the beginning of a flight of brick stairs, starting at a level considerably above the foundation-level of the tower; work did not go far enough to explain the meaning of the steps. The main result of Dr. Hall's dig was to show that the tower was in such a condition as to repay excavation, and that the amount of débris to be removed would make that excavation a slow and costly business. When it was decided that the Joint Expedition should undertake this work we did not expect to find anything much in the way of portable antiquities; we did hope to obtain further information as to the history of the building, corroborating or supplementing Taylor's cylinders; but our principal object was architectural, to recover the actual form and structure of a ziggurat.

II. *The Courtyard*

During the season 1922-3 we had traced the outlines of the temenos or sacred enclosure within which lay the most important of the temples of Ur, in particular the great temple of the Moon god, Nannar, who was the patron deity of the city. The mound

representing the ziggurat lay in the west corner of the temenos, close to the SW. wall and rather further away from the NW. wall; and in the SW. wall, directly in front of the tower's centre, we found the ruins of a gateway last repaired or rebuilt by Nabonidus. East of the mound and almost in a line with the SE. face of the tower which Dr. Hall had partly cleared we had excavated the shrine called E-Nun-Makh, the shrine of the Moon god and his consort. The ziggurat was still masked, except for the patch on its SE. side, by thousands of tons of broken brick and sand forming a shapeless hill with steeply sloping sides, from the upper part of which appeared the four ragged corners of the first-story brickwork. It was obvious that the rubbish from the SW. face and from some distance round the south and west angles could most conveniently be dumped outside the temenos wall. There was low ground here, denuded by torrent-water, and the Nabonidus gate afforded an easy track through the wall line; but the disposal of the débris from the NE. half of the building was not so simple a matter, for while the cost would be in direct ratio to the distance to which it was carried, the temenos wall was on this side far away, and to dump inside it was to risk burying something of importance. I very nearly took this risk in the interests of economy, being tempted by a wide stretch of low ground not far from the NE. foot of the mound, but first tested it by cross-trenches, and at once hit on walls and pavements only just below the surface; they belonged to a large building which occupied the greater part of the area bounded by the ziggurat, the E-Nun-Makh shrine, and the NE. and NW. walls of the temenos. With the means at our disposal it was impossible to excavate the whole of this area and to clear the ziggurat in one season. So we dug out to sixteenth-century level the NW. range of chambers and a strip of ground along the face of the SW. wall, and for the rest contented ourselves with tracing the walls, leaving the complete excavations for another year; thus we could recover the plan of the entire building and something of its history with the minimum of cost. The building consists of a large courtyard paved with brick, having along three of its sides a single range of chambers generally intercommunicating and reached by doors from the court; on the NE. side the rooms were of greater size and their arrangement more complicated, there being three suites of chambers, like self-contained flats, lying on either side of a gate-tower with triple doorway and wide gate-chambers. On the SW. there is another important gate which apparently gave on the ziggurat platform, but our excavations did not go far enough to prove the connexion; through one of the SW. rooms is again

a doorway with passage leading to E-Nun-Makh, but here a brick drain laid down by Nebuchadrezzar hides the steps which must have joined the two levels. The pavement of the court lies about 2.50 m. below the level of the ziggurat platform and 2.00 m. below the terrace that extends NW. of E-Nun-Makh, and the outer walls of the chambers along these two sides are at the same time the retaining-walls of the two terraces. This explains why the courtyard area was so low-lying in comparison with the ground all round as to make me suppose that it contained nothing of importance; but that was so far from being the case that the courtyard is itself a platform raised 2.60 m. above the pavement-level outside it to the NW. We dug down against the outer face of the NW. wall and found that the burnt-brick construction which from the inside had seemed to be no more than a foundation-course for the mud-brick walls of the building did in reality stand no less than thirteen courses high (pl. I, 1). In part, this raising of the courtyard building is due to the fact that it has been reconstructed over the ruins of earlier work; as it stands, it is the work of Kuri-Galzu (c. 1600 B.C.), whose stamp occurs in the upper courses of the burnt-brick walls, but before his time there existed on the site another building whose plan is still unknown, though some at least of the walls coincide with those of Kuri-Galzu. No attempt has yet been made to uncover this underlying structure, but the finding of loose bricks bearing the stamp of Bur-Sin (c. 2150 B.C.) suggests that it dates back to the Third Dynasty of Ur.

The most interesting feature of the building at the present stage of its excavation is the character of the SW. wall of the courtyard (pl. I, 2). The other three walls are relieved by the shallow rectangular buttresses which are typical of Babylonian architecture, but this is wholly different. Between panels of plain walling there are long stretches where the wall face is composed of a series of attached half-columns; the columns (they are really rather less than half-columns) are one metre wide and have a projection of 0.30 m.; down the middle of each runs a double T-shaped groove. The columns are built of specially shaped bricks, mud-brick above and burnt-brick below, thickly mud-plastered and whitewashed; when first unearthed the whitewash was astonishingly well preserved. At the NE. end (the only part as yet excavated) the brick pavement of the court was interrupted by a low sleeper wall, very roughly built, especially on its outer face, which is better defined by the straight edge of the asphalt that covered the brick pavement and ended against the wall than by its own brickwork; it runs nearly parallel to the columned



1. Outer face of wall of great courtyard building, NW. face, showing original pavement, and burnt and crude brick construction



2. Part of columned wall along the SW. of the great court



1. The Ziggurat from the great court



2. The Ziggurat, NE. façade

wall, is 0.35 m. high, and in its rough top has a row of shallow circular depressions 0.55 m. in diameter set at regular intervals of 2.50 m. There can be little doubt that this sleeper wall (once of course neatly plastered over) was the base for a row of columns with wooden shafts (which have naturally left no trace of themselves) forming a sort of cloister along the side of the court, to which the attached half-columns of the wall face would have given the effect of a double colonnade.

The German excavators, after eleven years' work at Babylon, came to the conclusion that the column was an architectural form never used by the Babylonians: such columns as they found upon the site (and these were fairly numerous in some parts) they attributed to the Persian, Greek, or later periods. But that the column was known in early Sumerian times we learn from the Temple of Tell el Obeid and from the excavations now in progress at Kish; and at Telloh the French found a massive brick-built pillar or pier in the form of grouped columns in a building of the time of Ur-Nina (*c.* 3000 B.C.). At Nippur Dr. Peters reported the discovery of a colonnade running parallel to a palace wall and forming a cloister much like ours, and attributed it to the Kassite period; but Professor Hilprecht flatly contradicted the discoverer and assigned the work to the Parthian age, with the result that no further attention has been paid to Dr. Peters's view. At Ur there can be no doubt about the attached columns, for they are very well preserved and satisfactorily dated, and for the free columns there is very strong evidence; and both belong to just that Kassite period to which the Nippur colonnade was originally referred. Further excavation should show whether the free colonnade ran the whole length of the court, and may give more conclusive proof of its character; but already we can say that the discovery is of prime importance for the history of architecture in Babylonia.

A certain amount of patching to the pavement of the court was done by Ramman-apal-iddinam (*c.* 1070 B.C.), but restoration on a larger scale was not required until the time of Sin-balaṣu-ikbi, Assyrian governor of Ur about 650 B.C. He raised the level of the courtyard, repaired the columned wall, and set back its line in the recess in the west corner in order to improve the approach to the first door in the NW. wall: a foundation-cone recording his work was found in situ under his mud floor in the northernmost gate of the SW. wall. The whitewash found upon the walls was of his date. Later still Nebuchadrezzar (*c.* 600 B.C.) seems to have found the building in a completely ruinous state, for he raised its floor-level by no less than 200 m., practically to the level

of the terrace outside E-Nun-Makh, and all that remains of the older building owes its preservation to having been buried under his floor. The Nebuchadrezzar building has vanished, swept away by winter floods pouring down from the higher mounds of the ziggurat and E-Nun-Makh, but probably it followed the lines of Kuri-Galzu's court; for that some at least of the doorways coincided is shown by scanty traces of a brick-work hinge-box above the original door of room 15, by the way in which a drain from E-Nun-Makh is taken carefully through an old door of room 22 instead of being cut through the wall, and by the discovery outside the door of room 6, at a high level, of two boxes made of Nebuchadrezzar's bricks which should have contained (but did not) the small statuettes that consecrate an entry. In the north corner of the courtyard, at a high level, was found a well, carefully built with shaped bricks, many of which bore Nebuchadrezzar's stamp.

It is too early to decide the purpose of the building, though the narrow chambers round three of its sides look like store-rooms, and those flanking the main gate might well be suites of apartments assigned to the priests of the Moon-god's temple; from the west corner there runs out a continuation of the NW. wall, obviously part of another wing occupying the area between the ziggurat and the NW. wall of the temenos, the excavation of which has only just been begun and its character therefore remains quite unknown.¹

Details. In the part of the courtyard which has been cleared there was a shallow basin with brick edges and lime-coated interior certainly intended for water. Room 1 had a brick floor at high level, probably dating from the restoration by Sin-balaṭsu-iḳbi; under this was found a door-socket stone with an inscription referring to a shrine dedicated to the deified king Gimil-Sin of the Third Dynasty of Ur, but the stone was unquestionably re-used in its present position and the inscription has no bearing on the nature of the Kuri-Galzu building. In rooms 2 and 3 were inscribed door-stones of Kuri-Galzu; under the walls of this room and of room 4 there were older walls. In room 5 was found a door-socket (re-used) of Ur-Engur. Against the outer jambs of the door of room 6 were found in position the brick boxes of Nebuchadrezzar already mentioned: they were 0.15 m. below the Sin-balaṭsu-iḳbi mud floor, which had been dug through when they were placed here; against the door of room 5 there were similar boxes but of mud-brick with burnt-brick lids, bearing no stamp. All these boxes were empty. In room 17 was a door-socket of Kuri-Galzu.

¹ The inscriptions do not help us much. The brick-stamps either give the name of E-temen-ni-gur, which is the Temenos generally (Ur-Nammu and Warad-Sin), or that of E-giš-sir-gal, which is presumably that of the great Nannar-temple complex (Kuri-Galzu, Sin-balaṭsu-iḳbi, Nebuchadrezzar, Nabonidus).

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The immediate importance of the courtyard building is the relation in which it stands to the ziggurat and to the shrine E-Nun-Makh, especially to the former. The outer walls of the SE. and the SW. ranges of chambers are at the same time the retaining walls of the terraces on which the other two buildings are set: it is probable that the chambers were little if at all higher than the terrace level, so that from the courtyard both buildings would have been visible, and seen from here the courtyard wall itself would appear to be the retaining wall of the upper terraces and would have the effect of adding a lower constructional stage to the buildings. Really, therefore, the courtyard is an intrinsic part of the ziggurat, and its columned

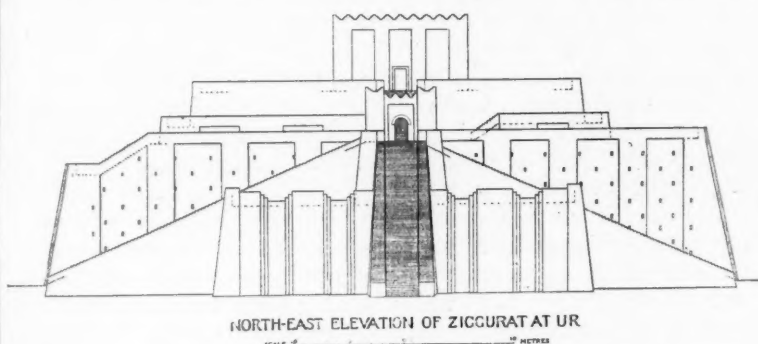


FIG. 1. Restored elevation of NE. front of the Ziggurat, by Mr. F. G. Newton.

wall forms an element in the ziggurat scheme. This is the more important when we realize that the NE. face of the ziggurat was not only its principal façade but the only side open to view; all the other three were more or less masked by adjoining buildings; and it was only from the courtyard that the ziggurat could be seen as a whole.

III. *The Ziggurat*

Mr. Newton's restoration of the ziggurat (fig. 1 and pl. III, 2) shows the building as it was after the repairs effected by Nabonidus in the sixth century B.C.; the whole of the lower stage is the work of Ur-Engur (Ur-Nammu), the upper stories are the additions made by the king of Babylon.

As has been stated above, the core of the original ziggurat was of unburnt mud-brick laid with mud mortar, the facing was of burnt bricks set in bitumen. The lowest courses of this containing wall were flush, but at pavement level there started

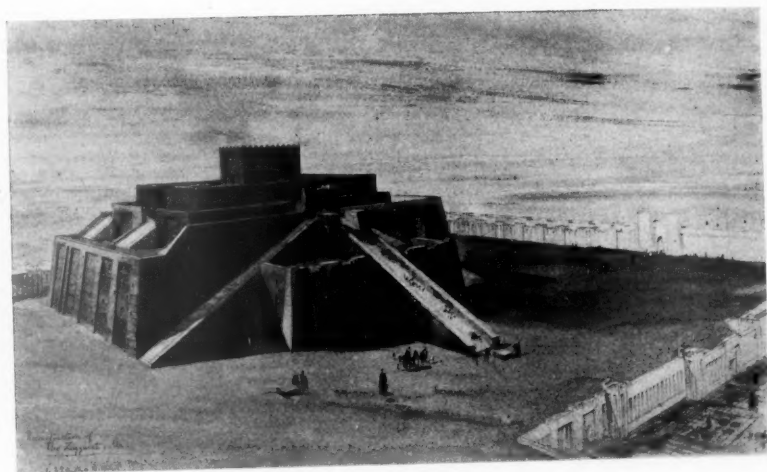
the shallow buttresses and recesses which relieved the wall face; the top of the wall was everywhere destroyed, but it is practically certain that here too there was a band of flush brickwork joining together the buttresses so as to give to the whole building a panelled effect, as was the case with the earlier temple-platform at Tell el Obeid, though at Ur the bottom border of the panels was hidden by the bricks of the pavement. At regular intervals the builders left narrow oblong holes which ran through the thickness of the facing wall to the crude brick core; these are 'weeper holes' intended to drain the core, a necessary precaution, for the heavy rains of the Mesopotamian winter would certainly soak through the brick floors of the terraces, and had there been no escape for the moisture the crude brick would have swollen and burst the retaining wall. In addition to this, in the two short walls of the building, towards their western ends, a rectangular shaft runs up the whole height of the brickwork; the shafts, which probably once contained terra-cotta pipes, are drains for carrying off the surface water from the wide platforms which lay at either end of the tower.

On the NE. face is the ascent (pls. II, 2 and III, 1). From the centre of the building there ran out a solid brick-walled ramp supporting a flight of one hundred stairs with brick treads; against the wall of the ziggurat were two other flights of brick stairs (also of a hundred steps each) which starting from the north and east corners of the building ran up, cutting across its face, to converge with the central stairway on a common landing on the level of the second terrace. In the angles on either side of the central stairs were solid towers, their walls decorated with doubly-recessed panelling, rising to the height of the diagonal made by the line of the side stairways and with flat tops accessible from those stairs. There are certain irregularities in the construction which, as Mr. Newton's elevation shows, are accentuated by a sinking of the foundations on the north of the central stairs; these stairs are themselves not truly in the centre, the slope of the side flights is not quite the same, and the angle-towers consequently look uneven, that on the south ending on the line of the slanting stairs, that on the north rising above that line and masking some of the steps. This must have been unintentional. A further but intentional irregularity is in the levels of the tower itself. This is considerably higher at the north end than at the south, and the lowest platform at the north end corresponds to the second at the south, an asymmetry which is confusing when one tries to describe the building.

At the back of the landing on which the three staircases



1. The Ziggurat, NE. façade, with workmen on steps and terraces



2. Restoration of Ziggurat

(From a drawing by Messrs. F. G. Newton and W. Walcot)



1. The Ziggurat: the northern flight of the triple staircase



2. The Ziggurat: the southern flight of the triple staircase

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converge there was a monumental gateway projecting from the main wall of the ziggurat at this level: only the foundations of its two heavy piers survive, but it may well be correct to restore it with an arched entry, for the piers are the work of Nabonidus, and in his time the arch was a familiar feature of Babylonian building. The gate led on to the second terrace,¹ here little more than a passage between the parapet wall (which was the outer wall of the ziggurat carried up breast-high above floor-level) and the side of the third stage: the terrace ran round three sides of the tower, but if one turned to the right on passing through the gate there was also a small flight of steps leading up to the third terrace (pl. V, 1), while if one turned to the left one came to another flight leading down to the first terrace which stretched across the SE. end of the building. Immediately in front of the gate there was again a flight of steps which, cutting through the edges of the third and fourth stages, ran straight up to the top level of all where stood the shrine. If on turning to the left one went down to the lowest terrace, one obtained the best view of the upper works of the ziggurat. The building as a whole was best seen from the courtyard, whence the lowest stage with its triple staircase and the shrine capping the tower were the outstanding features; but from there the none too lofty upper stages would have been almost hidden by the parapet wall and certainly dwarfed by the disproportionate bulk of the base. Nabonidus's new building was designed as a thing in itself, apart from the base which he found ready to his hand, and it was from the top of that base, from the broad terrace at its SE. end, that it showed to the best effect; this was the true frontage of the upper stories. The staircase on the east by which one had descended from the second stage was matched by one on the west; in the centre a broader and more imposing flight, cut through the edges of the stages, led up to the topmost platform, and it is probable that where it cut through the third stage the ends of this were sloped to make two small stairways communicating with the second terrace. Immediately above the main stairhead stood the shrine.

Details. The whole of the lowest stage with its triple staircase is the work of Ur-Engur (Ur-Nammu), but the parapet of the stairs had

¹ To make the following account clear it should be remarked that the lowest or first platform existed only at the SE. end of the ziggurat: the second platform only at the NW. end and along the NE. and SW. sides: consequently the third platform was the first to run all round the building; it never has more than one platform-level below it but is really the third in its relation to the general scheme of the ziggurat.

been rebuilt and the treads relaid at a higher level by Nabonidus. The treads of the central staircase were all gone, but on the north staircase 73 and on the south 91 remained more or less complete (pl. IV). The parapet walls both of the stairs and of the terraces had all been ruined down to or below floor-level, so that it was impossible to say whether the former had originally been stepped or straight and the latter plain or battlemented; in the restoration the stair parapet is shown as stepped, which is perhaps the more likely, and the terrace parapet plain, but it must be remembered that for these details there is no evidence in situ.

The small flight of stairs (pl. V, 1) inside the gateway leading to the third stage was found almost intact, and though the top course of the parapet wall was missing it has the appearance of having been stepped. Of the central staircase running up to the top platform and the shrine there was nothing left at all; from the level of the landing a trough-like hollow, probably the mark of one of Taylor's trenches, ran up to and across the summit of the ziggurat, cutting below the foundations of any wall that may have existed and exposing the heart of the mud-brick core. In restoring a staircase here we have been guided by three considerations, first, that such is inherently likely, since it is architecturally wrong that the shrine could have been reached only by first descending the narrow stairs to the lowest terrace; secondly, that Taylor did find a brick staircase, and as his digging was confined to the top of the ziggurat it must have been at the top; and thirdly, that there is here plenty of space for such stairs, and that if Taylor found and exposed them their disappearance was almost bound to have followed, leaving just such a hollow as we actually found.² A little of the paving of the passage leading south was found in position, but it broke away before the stairs going down to the lowest platform were reached; these had to be deduced from the change of level and from a thickening of the pavement which seemed to show the beginning of the foundations of the steps. Like all the corners of the ziggurat this east corner had been hopelessly destroyed by Taylor in his search for the foundation-tablets of Nabonidus, and the stairs, coming at the very angle of the second story, would have been the first things to suffer; in the same way the corresponding flight at the south corner had disappeared. About the central stairs leading from the lowest platform to the summit there was no doubt, for though there was no trace left of the actual treads yet the side walls were partially preserved, and that on the left of the steps proved its character by having its foundations stepped up in the crude brickwork of the second-story core. For the two small flights joining the third and second stages there was no material evidence; their existence is conjectural only, depending on architectural likelihood.

In the face of the top stage there were at regular intervals deep recesses built in the brickwork, all of which had been filled up flush with bricks of a different type and the whole concealed by a mud-

² We could prove modern destruction at precisely this point; the wall on the south side of the presumed stairs has lost nine or ten courses of its brickwork in the last few years, as is shown by contrasting its present condition with older photographs. A whole staircase may well have vanished in sixty years.





1. The Ziggurat: small flight of steps leading from 2nd to 3rd stage, NE. face



2. The Ziggurat: SW. face from outside the Nabonidus gate in the temenos wall



1. The Ziggurat: SW. face



2. The Ziggurat from the W. corner

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plaster coating. The soft bright red bricks of which the stage was constructed bore no name-stamps, but as the construction rested on brickwork of the normal sort where the name of Nabonidus occurred, there was no doubt as to its date; the bricks filling the recesses also bore the name of Nabonidus and therefore the recesses must have been blocked up almost as soon as they were built. Naturally they reminded one of the ἀναπαυτήρια in the ziggurat of Babylon described by Herodotus, but if they were intended to be such, the architect must have changed his plan at the last moment. In any case, seeing that they were plastered over, they cannot appear in our restoration of the ziggurat.

Of the shrine on the top nothing was left at all, the surface of the uppermost platform having been ruined below the foundations of any building that stood on it. That it was faced with blue-glazed bricks is certain, for these were found not only at the foot of the tower but throughout the débris piled against its sides and right up to the top edge of the uppermost stage, so that they can only have come from the summit of the tower: the only building that is to be looked for on the summit is the shrine, and we might have expected this shrine to be blue. The glazed bricks bear the stamp of Nabonidus. Since nothing is left of the ground-plan of the shrine, we have restored it on the simplest lines, as a plain rectangle with panelled walls (the large proportion of glazed corner-bricks warrants this assumption) and two doorways, one in the NE. and one in the SE. walls, corresponding to the two staircases by which the top platform was reached. Purely conjectural, too, are the crockets along the top of the shrine and over the stairway gate; but these are so far consistent with what we know of Babylonian architecture that they may well pass muster. In the case of the two angle towers between the branches of the triple staircase the buttresses of the wall face are in the restoration carried up so as to form stepped battlements; here again there are no actual remains to support the restoration, but there is a certain justification for it. In the main wall of the ziggurat the recessed panels are so shallow (0.15 m.) that the top frame can be made by a half-brick projection, i. e. a row of headers brought out flush with the buttresses; but in the angle towers the recesses are far too deep to be bridged in that way, and a top frame would necessitate the use of timber, and we have neither evidence nor justification for assuming the presence of such; either the wall top was flat, or the buttresses were carried up as we have suggested, and the latter is perhaps preferable as being more in harmony with the crocketing restored on the Nabonidus walls.

Simple as is the ziggurat scheme, in principle a series of rectangular stages superimposed one on another, its development results in a monument whose architectural merit is of no mean order. Looking from the courtyard, one saw in the foreground the vertical lines of the columned wall giving to the terrace an effect of solidity and height, and by these vertical lines the eye was led up to the contrasting features of the ziggurat proper. Here everything is centralized, everything points up-

wards and inwards. The batter of the outer walls prepares one for the sharper contour of the steps formed by stages and shrine; the three converging staircases lead the eye directly to the centre of the huge mass of brickwork, and the middle flight, continued behind the gateway, focuses all interest on the shrine which was in a religious as well as in an architectural sense the building's crown.

Right across this upward and inward linear scheme cut the colour decoration. The shrine, as we have seen, was bright blue, shining in the sun. The top was red: it was built of large lightly fired bright red bricks and was covered with plaster of the same colour. Below this the whole ziggurat, walls and steps alike, was black, the brickwork covered with a thin coat of bitumen applied with a brush. Below this again was the white-washed columned wall of the court. The four colours in their order, white, black, red, and blue, have their astrological significance, representing the zones of heaven, so that the ziggurat is indeed the heavenly hill of the god; and the lines of the building run athwart these horizontal bands to the highest heaven, which is god's house.¹

The lower part of the ziggurat, up to the top of the first stage at the SE. end and to the top of the second stage at the NW. end, was the work of Ur-Engur (Ur-Nammu). Of the upper works put up by this king scarcely anything remained, for all that had survived up to the sixth century B.C. was either destroyed by Nabonidus

¹ 'The ascertained colours applied to the stages of the ziggurat at Ur are a welcome contribution to the settling of a much discussed question. While the blue of the topmost shrine is not only attested archaeologically, but confirmed by the inscriptions of Nebuchadrezzar, much doubt has been expressed whether the other parts of the building were also coloured. Victor Place reported that he had found traces of colour upon the ziggurat at Khorsabad, and, in spite of sceptics, it now appears that he was probably quite right. But from the fact that some of the most famous ziggurats (e.g. that of Borsippa) bore names which suggested that they were of seven stories, the theory was developed that the normal type was a building of seven stories, each coloured the hue that was conjectured to symbolize the Sun and Moon, and the five planets (Jupiter, Saturn, Mars, Mercury, Venus) known to the Babylonians. It was even supposed that these colours may have corresponded with those of the seven concentric walls of Ecbatana which according to Hdt. i, 98 were respectively white, black, purple, dark blue, scarlet, silver, and gold. But, even if these colours could be proved to have left traces, or to be identified with the heavenly bodies named, it is quite certain that seven was only one of the numbers of stages which a ziggurat might have, three or four being at least equally common. It is therefore impossible to maintain this theory of the planets, but, as the ziggurat seems to represent an artificial mountain, with the abode of the god upon the (blue) summit of it, there is every reason to see in the arrangement and the colouring of the stages a cosmological significance, even if its precise import is uncertain.'—C. J. GADD.

or buried beneath his new constructions: only along the SE. did we find a stretch of wall bearing the brick-stamps of the earlier king. Here there was one feature of peculiar interest. At the east corner where Nabonidus's second stage came up against the original wall we dug through the Nabonidus brickwork so as to expose the older wall, and found that a deep hole had been hacked into the core of the latter before the new bricklaying was done and the breach (which was most effectually hidden by the new work) had never been made good. Without doubt the hole was made by Nabonidus's men looking for the old foundation-cylinders concealed in the corner of the original building, the cylinders which Nabonidus is quoting in his own inscriptions when he states that the ziggurat was built by Ur-Engur and his son Dungi (Shulgi). It is a pleasing proof of the sound archaeological methods of the Babylonian king, though we may regret that he did not have the cylinder restored to its place.

At the foot of the ziggurat, at its east corner, a clearing down to foundation level produced a small patch of brick paving with the stamps of Ur-Engur, from which we may assume that the whole area round the building was originally paved. It is curious that, in spite of what Nabonidus tells us, there was found only one fragment of a Dungi brick (in the area south of the central staircase) as evidence for that king's having taken any part in the building of the ziggurat; either his work was confined to the upper stages and has totally disappeared, or he was content to use his father's bricks, perhaps because he was associated with the work in his father's lifetime only, and so was mentioned on the foundation-tablets but not on the bricks, which would bear the name of the reigning king only. Two or three loose bricks of Bur-Sin were found high up in the débris, but nothing can be gathered from their presence. The only other ruler who has left us traces of himself on the ziggurat was Ramman-apal-iddinam, who laid down against the NE. façade a brick pavement of which a few patches survive: the next builder on the site was Nabonidus.

IV. *Surrounding Buildings*

Against the NW. face of the ziggurat we cleared down only to the Nabonidus level, and did not encounter walls of the late period, though the west wing of the courtyard building cannot be far away and at the north corner there were remains of walls of the time of Ur-Engur connected with the northern staircase: the investigation of these was held over for another season.

Along the SE. face we dug down for the most part to the Third Dynasty level without finding walls directly joined up with the ziggurat, but here again there are obvious ruins close by, and at the south corner walls run out continuing the range of chambers that lie along the SW. side. At present we can only say that the two ends of the ziggurat, if not actually built against, were certainly masked by buildings nearly adjacent.

Along the SW. side the space between the ziggurat and the temenos wall was almost wholly built over. Most of the walls were in a very ruinous condition, and at the south end of the area matters had been complicated by the erection in the Persian period of a factory for the manufacture of plain and glazed pottery; the lower part of the kilns remained and the soil was full of fragments of wasters. In this building many of the older walls had been re-used, and it was not always easy to distinguish the different dates; of the earlier remains the bulk were of the time of Nabonidus, and these were the only ones that gave anything like a consistent plan, though it must be remembered that here too there were incorporated certain elements of still older work.

Almost opposite the centre of the ziggurat the temenos wall is pierced by the Nabonidus gate (*Ant. Journal*, iii, pl. XXV). From the gate-chamber one passed through the inner doorway into a large open court paved with bricks of Nabonidus. Along the south side of this there ran a raised platform 0.50 m. high; on it was a rectangle defined by a coping of half-bricks with a brick floor sloping down to the centre, where there was a circular terracotta drain leading to a waste-pit; the sloping floor and the brick coping were covered with a hard white lime plaster. Further along the platform were remains probably of a second similar construction. Presumably we have here lustration-basins set at the entry of the sacred area for the use of visitors. Beyond this, to the south, were two ranges of rooms, one abutting directly on the wall of the ziggurat, the other, of larger chambers, against the temenos wall: the former seemed to be little more than a passage with cross-walls and doors (in one of these was found a hinge-stone of Bur-Sin, perhaps re-used), while the latter is hidden beneath the ruins of the pottery factory and awaits further excavation before any proper description of it can be given. North of the entrance court everything was very much destroyed and scarcely anything was left above floor-level, but here again the paved floor was raised 0.30 m. above that of the entry, so that there was either a platform corresponding to that on the other side or else a separate room whose dividing wall has disappeared.

South of this supposed room came two sets of four and three long narrow compartments; the first four were bounded to the east by a continuation of the east wall of the room with the raised floor, for both the entry court and this room were separated from the ziggurat by a passage which was a prolongation of that running south of the entry: the next three compartments were longer, running nearly up to the ziggurat, and the passage either came to an end or was narrowed down nearly to nothing—probably the former, but there was no decisive evidence on the point. Between the compartments and the temenos wall there lay an open space (cut off at one point by a cross-wall, but this was of later date) which had once been floored at the same high level as the room to the south. These compartments were about 0.15 m. deep, divided by double rows of (broken) bricks set on edge and the space between them filled in solid with earth; the floors were of bitumen-asphalt curved up at the edges and taken 0.05 m. up the face of the brick partitions, and all sloped down fairly sharply to the north corners. The partitions had certainly never been carried up so as to form walls, and probably had never been higher than they are now. I have little doubt that these are oil magazines; the long narrow compartments are suited to the storing of great jars, the sloping asphalted floors are suited to the keeping of a liquid which, soaking through the porous clay, would run down to the deepest corner and there be scooped up again instead of being wasted; the tops of the partitions serve as gangways giving ready access to the oil-jars standing in a double row in each store. The arrangement is almost exactly that of a modern petrol store, and the parallel with the famous magazines of Knossos and Phaistos is hardly less striking. Plenty of oil was paid in to the temples of Babylonia by way of tithe, and it must have been kept somewhere in the temple area; this range of low buildings at the foot of the ziggurat seems to have been such a depository.

There had been more such magazines further along to the north, opposite the west angle of the ziggurat, but here the destruction had been so complete that even the plan of them could not be made out with certainty.

V. Objects

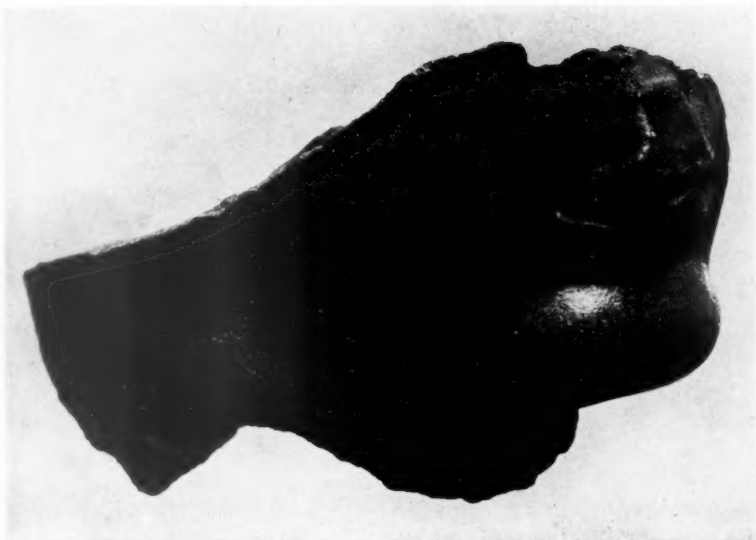
Not many objects of importance were found in the course of the work on the ziggurat. Duplicate fragments of the Nabonidus foundation-cylinders found by Taylor occurred, and two pieces of the large cylinder found by him incomplete; it was a remarkable chance that these two should have actually fitted on to the

fragments discovered sixty years before. A fragmentary but interesting inscription of the New Babylonian period dealt with contracts for the demolition of existing buildings at Ur and the erection of new premises on the sites. Door sockets were obtained of Ur-Engur, Bur-Sin, Gimil-Sin, Kuri-Galzu, and Nabonidus; the foundation-cones of Sinbalašsu-iḫbi have already been mentioned, and besides these were cones of Ur-Engur, Nur-Adad, Warad-Sin, and (from outside the excavations) Kudur-Mabug and Libit-Ishtar.

Against the NE. façade of the ziggurat was found a very fine fragment of sculpture, part of a male face in diorite, dating from the Third Dynasty of Ur (pl. VII, 1). A few other sculptural fragments of less importance in themselves may be taken as evidence that the building, or at least the shrine on its summit, was decorated with statues. Some very small model boats in bronze were found high up in the débris.

VI. *The Cemetery of Diqdiqqeh*

A mile and a half NE. of the ziggurat, between the main railway line and the Nasiriyah branch, there is a patch of low-lying ground, occasionally cultivated, which the natives call Diqdiqqeh. Here is a much-ruined cemetery of the period of the Third Dynasty of Ur. Sufficient work was done by us on the site to show that, though the objects were fairly plentiful, owing to the denudation and turning-over of the shallow soil they were in such a state of confusion that little scientific knowledge could be obtained by excavation; the tomb-groups had all been broken up, and it was seldom that definite association between things could be established. The site is, however, a happy hunting-ground for treasure-seekers, and I took advantage of this fact to collect from the natives the scattered antiquities which they might bring to light. As a result we have less information than we should wish, but probably all that the nature of the site would enable us to gain, and a very large collection of extremely interesting objects. The date of the cemetery is quite certain. Every object (and they are numerous, e. g. brick-stamps, inscribed or figured cylinders, etc.) which is intrinsically datable belongs to the period of the Third Dynasty of Ur (N.B. this archaeological period may well be longer than the actual life of the dynasty), and there is not a single object which on internal grounds we should be justified in assigning to any other date; the whole collection is consistent with itself and with the age assigned to it.



1. Fragment of a diorite statue of the period of the 3rd dynasty of Ur



2. Terra-cottas from the Diddiqqeh cemetery



1. Terra-cottas from the Diqdiqqeh cemetery



2 Terra-cottas from the Diqdiqqeh cemetery

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Apart from the cylinder-seals, precious for their chronological evidence, the most interesting things are the terra-cottas (pls. VII, 2, and VIII).¹ For the most part these represent gods and their worshippers, but there are also animal figures, and models of boats, chariots, household furniture, etc., which may be toys or votive offerings or both. The figures, human or divine, give a wide range of types, varying from some which are of normal Sumerian character to others which are almost Greek in their freedom; there are prototypes of things familiar to us in later Assyrian or Babylonian art, and there are grotesques which strike an altogether novel note. Most common is the nude female figure with exaggerated sexual organs, which is probably a hierodule; the goddess figures are usually distinguished by the horned crown and are draped; they are sometimes standing upright, sometimes seated upon thrones; sometimes they are accompanied by a god. The women are remarkable for the variety of their elaborate coiffures, which attain grotesque proportions in some examples; the drapery, too, is sometimes most elaborate, pleated and flounced, and composed of a number of separate garments. Of the male figures the most obviously human are the worshippers bearing animals as offerings; the horned crown generally marks the divine. Here again the dress shows great variety, for side by side with the plain *kaunakes* of tradition we find the heavy woollen shawl worn over the left shoulder, the long plain chiton with fringed edge and overfall, and garments rivalling in elaboration those of the other sex. Some of the men are beardless and with shaven heads, others wear beards ornately curled and trimmed, and have long curls hanging down on their shoulders. The gods are characterized by a variety of attributes, maces, flails, double axes, sickles, etc. Animals include lions, pigs, monkeys, horses, tortoises, and the snake is common, modelled in relief on miniature coffins (?). The majority of the figures are cast from clay moulds, of which examples were found, but some are hand-modelled in the 'snow-man technique'; one miniature vase has an incised decoration of birds and trees, and a fragment of a large pot has, also incised, a very remarkable human figure drawn in profile. The model chairs have woven seats and high backs decorated with designs of birds, trees, crescents and stars on ritual staves, etc.; chariots have solid wheels with cogged rims and a pole for two horses; wheel-shaped rattles were common. Great numbers of miniature clay pots were found, generally hand-made and rather rough, which reproduce the forms of the large vessels of everyday use. Large bugle- and ball-beads in glazed frit were common: otherwise

¹ A number of these, found last year, were illustrated in *Ant. Journ.*, iii, 332.

carnelian and lapis lazuli were the usual materials: one grave produced some hundreds of very small gold beads, plain spheres and fluted, together with small lapis and carnelians (the grave was destroyed, but all the beads were collected from one patch of soil).

A detailed account of this cemetery would demand far more space than can be given to it in an article of this sort, and would in any case be incomplete, for the previous season yielded much material from the same spot, and there is every hope that future years will increase our collection; full publication must therefore be reserved for a later day. But enough has been said here to show that the Diqdiqqeh site is of great importance for the wealth of small objects which it continues to produce, objects of a kind not generally common in temple or house ruins and illustrating in an unusual way the religious ideas and the domestic life of the period to which they belong.

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*Report on the Excavations at Stonehenge during
the season of 1923*

By LT.-COL. W. HAWLEY, F.S.A.

[Read 19 June 1924]

IN presenting my Fifth Report on the work carried out at Stonehenge in the season of last year, it will be well to make a short review of the work from 1919 onwards. The first two years were spent upon rectifying the positions of stones nos. 6 and 7 and of nos. 1, 2, and 30. During this work, the contents of the pits in which they stood were examined as well as the soil around them, and the features presented by the ancient working and fitting of the stones were noted. A little work undertaken in spare time led to the discovery of the Aubrey holes, and of a large hole in which the Slaughter Stone probably stood. In the third season about 40 yards of the main ditch were excavated on the south side, and an examination made of a spot which had been previously considered a barrow. In the fourth season another portion of the ditch on the north-east was opened, which led to the discovery of the causeway and entrance to Stonehenge through the earthwork, also of a great number of post-holes which appeared to be the remains of a palisade in the entrance. Another stone-hole near the Slaughter Stone was found, and dwelling-pits on both sides of the causeway.

I should also like to make a few observations to elucidate points in this and previous reports. I have frequently mentioned a 'top layer' or 'upper layer', and perhaps have not been sufficiently explicit in describing what I wish to convey by that term. The top layer is one that is distributed more or less evenly over the whole surface at Stonehenge, including the ditch outside the rampart, but it is absent in places eroded by traffic. It varies in thickness from an inch to 15 in., rarely deeper. It seems to have originated at the time Stonehenge was built, as the masons' chips occur in it but not below it. Unfortunately it is not stratified and is a jumble, beginning with neolithic flint implements, passing to small fragments of Bronze Age and Roman pottery, and thence onward to objects of every successive age down to the present time, but as it gives a limit to the masons' chips and incidentally to the building of Stonehenge, I have taken it as a guide for

dividing that period from any other which preceded it. No Neolithic pottery has yet been found, not even in the ditch bottom. Bronze Age pottery must have been introduced into the top layer since the building of Stonehenge, as such pottery is not contemporary with scrapers, borers, and rough Neolithic flints which were found associated with the building of the monument, and none of this pottery was found in the lower levels when the stones were being adjusted. Further, it may be remembered that the silt of the ditch when it was excavated was found to be divided abruptly from the top layer. This surface deposit is also helpful in placing periods subsequent to that of Stonehenge. Sometimes there are cavities which contain, in addition to those in the top layer, chips of stone throughout their depth. In this instance it can be inferred that the cavity had been filled at the time Stonehenge was built, or immediately after. Another cavity might have in it both chips and Roman period pottery; this would indicate either the making or disturbance of the place about the Roman period or a little later, but if a cavity is found to be filled with everything the top layer contains, it can be assumed that the disturbance came in recent times. So in this way the top layer becomes a sort of chronological index.

Last year I had not a plan which adequately distinguished the localities referred to, but I now have one that shows the results of the work of both seasons, and gives a satisfactory explanation (pl. IX).

The work of last year was carried out in two places, one on the Avenue, and the other inside the circular earthwork. That on the Avenue was begun first, and consisted in laying open the land from the line of the previous year up to the Helestone, taking in all of the Avenue which is inside the enclosure bounded by the high road.

Two cuttings were made, each one taking in the entire width of the Avenue and the ditches at the side. The first cutting, nearest to Stonehenge, was 80 ft. long, 16 ft. wide on the east and 20 ft. wide on the west, and the soil upon it was removed down to solid chalk. Eight more post-holes were found, in continuation of those of the previous season, making the total number 53. They were in an irregular row towards the west, and coincided with the lines of the others running from NE. to SW., proving to be the last of the group. They were similar to those previously found and were filled with loose chalky dirt containing nothing. When the ends of the Avenue ditches were exposed they were found to be independent of the earthwork ditch and began at 10 ft. from it. This section produced

nothing more and was disappointing, and the Avenue had been so much eroded by traffic that none of the original surface remained, and there were not even stone chips in the shallow chalky soil covering it, but they appeared on the east side and over both ditches.

The poverty of this place made me decide not to lay open any more land here but to make another cutting, similar to the first and near the Helestone, trenching the intermediate portion, and also opening the side ditches on the way to it. The small ditch on the west side seemed to have been begun by cutting into one of the post-holes of the last row of the palisade, and was so much eroded that the bottom was only an inch or two below the solid chalk, but it gradually increased in depth towards the high road, where it was 3 ft. deep.

The ditch on the east side began in a round hole $2\frac{1}{2}$ ft. wide and about the same in depth in the chalk rock, and had suffered but little from destruction. The distance of the ditches from one another where they began was 70 ft. They were carelessly made, their line was very wavy and their depth irregular, but on an average they were about 3 ft. deep. The upper layer above them contained Roman period pottery and masons' chips, the latter reaching farther down and ending upon pasty chalk mud or silt about 12 in. thick, upon the bottom. Two decayed horn picks were found at the bottom of the west ditch and one in the east one, and there were flint chips in both of them. As the layer of silt in the ditches was a thick one and contained no masons' chips it might be inferred that the Avenue preceded Stonehenge by a fairly long interval, as the silt would have taken time to accumulate; the ditches apparently having been allowed to silt up. At the end of the east ditch excavation I turned westward towards the other one, making a cutting 16 ft. wide at the east end and 8 ft. on the west. Upon turning from the ditch to the cutting a large dump of sarsen chips was found, a few of them in the ditch resting on the silt, but most of them at the line of the Avenue bank, which was almost level here. Under the chips was much sarsen sand, and the great accumulation of them indicated the dressing here of a large stone. The fragments numbered 3,760 and were of all weights from 2 or 3 pounds downwards. Some were the crust of a natural stone, other pieces were reddened by burning. There were five small hammer-stones but no large mauls; perhaps after use they were carried away for similar work elsewhere. Near this and partly under the chips a patch of loose soil appeared in the solid chalk. Digging into it showed a crater-shaped hole 5 ft. in diameter and 4 ft. 6 in. deep from surface level; it was 24 ft. distant from the Helestone. The hole may have held a large natural stone

taken from it and dressed for Stonehenge, so accounting for the dump of chips. One or two small holes near might have been for steadying the legs of some timber contrivance for moving the stone. Nothing more occurred in the cutting until about half-way across it, when another hole was found, rougher than the last with irregular sides, possibly caused by extracting a stone from it. In this case there was no dump of chips, but some of hard grey sarsen were scattered around the spot. The depth of the hole from surface to bottom was the same as the last one, and the diameter varied from 3 ft. 9 in. to 4 ft. 6 in. These holes were equidistant from the Helestone about 24 ft. Towards the west of the cutting and at the line of the Avenue bank a patch of humus was seen in the surface of the solid chalk on the north edge of the cutting ;

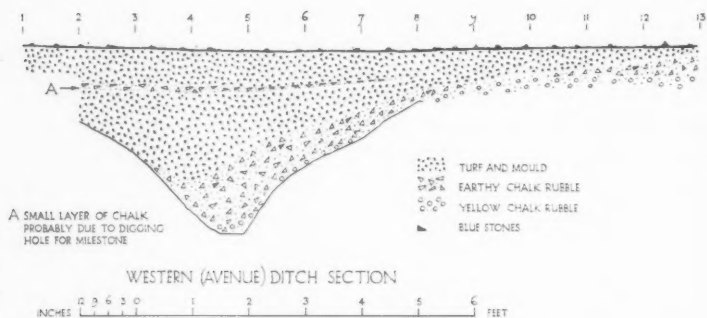


FIG. 1. Section of Western ditch of Avenue.

this when dug into and emptied proved to be a large post-hole with a depth of 43 in. and a diameter of from 28 in. to 20 in. On the east of it another was found 35 in. deep and 24 in. in diameter, and after this came a third with a depth of 32 in. and diameter of 23 in. They were all in the same line, with an interval of 6 ft. between them. Later, in a disturbed spot traces of another in the same line were met with. The holes were filled with fine chalky dirt containing nothing. The first hole, owing to its depth, had given the person who made it some difficulty in removing the soil, and to facilitate this an indentation at the side had to be made, thereby spoiling the shape of a hole symmetrically round like the others. They resembled those on the causeway and were evidently of early date, as the Avenue bank passed over the first and partly over the second, showing existence previous to the Avenue. A good deal of disturbance seemed to have taken place around the second large stone-hole which could not be



The second cutting across the Avenue, showing the Hele Stone and partly excavated circular trench around it.
In the foreground are three post-holes and a large stone-hole on the right. Another stone-hole is at the extreme end of the cutting.

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accounted for, either when originally setting up the stone or by removing it later. This disturbance took the form of a trench with wide sloping sides about 9 ft. wide, which had been made from the stone hole towards the Helestone, in a direction at first rather to the left but afterwards advancing to the west side of the stone. I did not follow the course of it up to the Helestone, as I should like to have done, for I avoided going nearer to it than 10 ft., fearing to disturb its stability (the depth being unknown), and aware also that it listed a little towards the south. A satisfactory examination would not be possible without permission and assistance from the Office of Works. If this could be done and the position of the stone rectified it might reveal the period when it was placed there, and possibly the reason for its erection. The wide cutting seems to have been made about the Stonehenge period, because the soil returned to it contained chips of all the varieties of stone. Two theories for making it are presented. The first is, that after removing the stone from no. 2 hole the workmen cut a wide trench to the Helestone for inspecting it, intending to take it down also, but finding it unsuitable they left it alone. The second is, that they moved the stone from no. 2 hole and made it the Helestone. The latter idea I do not consider to be tenable, because no. 2 hole is not big enough to have held a stone so large as the Helestone; so for the present I incline to the first theory and think the Helestone may have formed one of a group independent of Stonehenge. The proximity of the high road prevents any knowledge of the conditions which exist on the NE. side, and the road itself also covers quite a third of the discovery next made, which was a trench around the Helestone (pl. X). This was 10 ft. from the stone and was 4 ft. deep and $3\frac{1}{2}$ ft. wide, with nearly perpendicular sides. The object of it is obscure, but probably had some mystic reason and might have been expected to surround a dolmen or an interment rather than an upright stone. It was certainly a partly open trench at the time Stonehenge was built, as masons' chips were found in the higher part of it. There were about 18 in. of dirty chalky silt upon the bottom and a much decayed horn pick, but no chips: above the silt they began to appear, sparingly at first but increasing in numbers as the filling rose to the top. It is possible that it was filled in over the silt when the wide trench, cutting it on the west, had soil returned to it, as the distribution of chips corresponded in both places. There is a layer of broken flints around the Helestone immediately below the surface, about 9 in. thick, which contains all varieties of chips, and is evidently a layer of the time of Stonehenge. Both the trench and the Helestone remain unsolved mysteries for

the present, but their blocking position and that of the other two stones suggest existence before the Avenue. Nothing resulted from trenching the intermediate part of the Avenue between the two cuttings: it was quite barren. A hole was found close to the edge of the first cutting, but it was of very irregular form and did not appear to be the result of human labour, nor was it in a position that was referable to anything, and I am inclined to think that it was a hole in which a thorn bush may once have grown. Many unaccountable holes have from time to time been met with which when excavated showed clearly they were not the result of digging. Any spot that shows disturbance must be excavated, and unfortunately several proved to be of this description. All appears promising at first in dirty rubble and humus, but soon this changes to clean loose chalk which, although loose, could obviously never have been moved by hand; the chalk then gradually assumes the form of natural stratification. This is why I consider that bushes grew in these places, and that the movement and perhaps chemical action of the roots caused disintegration. Similar conditions were noticed in several places outside and just beyond the ditch, where a hollow sound led me to believe there might be holes of a former stone circle, but when excavated they all turned out to be holes like those I have just mentioned.

After the Avenue excavation had been completed a systematic search began of the land inside the earthwork, and in this I had the valuable help of Mr. Newall, who frequently came to assist me. The search was carried out by cutting many series of trenches, parallel with one another from the inner slope of the rampart to the circle of Stonehenge, beginning at the entrance, where work had ceased the previous year. The trenches ultimately numbered 107 and were carried over an area which included the north-east quadrant of Stonehenge, every foot in them being probed after laying bare the solid chalk to ensure nothing escaping observation. The majority of them were shallow and unproductive, but there were some that yielded objects of interest and importance which will be mentioned presently. The first few trenches from the entrance were in eroded chalky soil, similar to that on the Avenue, after which the land gradually rose higher and a layer of crushed and broken flints was reached, blending with the top layer. The flint layer reached about 9 in. below ground level and was followed by variable chalk rubble, from 5 in. to 9 in. thick, and after that solid chalk. The flint layer contained masons' chips and hammer-stones both of flint and of quartzite, many of them being broken, and it seemed to be chiefly composed of sharp angular pieces from hammer-stones which had been shattered by use.

This layer of flint was afterwards found to be deposited over the whole of the approach to the stone circle, and in width might be roughly equal to that of the causeway entrance, but as the western limit of it has not yet been examined this is at present a little uncertain. It is a continuation of a layer mentioned in my second report as being met with on the west of no. 1 stone, spreading out around no. 29 and appearing to enter the circle of Stonehenge. For some time past I had wanted to examine this locality as I had previously noticed hollow-sounding places at intervals towards the east. In the sixth trench, and at each end of it, patches of humus appeared in the solid chalk. The trench was enlarged and the patches fully exposed. The one shown at Y was opened (pl. IX) and the cavity proved to be a hole of oblong rectangular shape, 37 in. deep. At the top it was 5 ft. long by 3 ft. wide: at the bottom 2 ft. 8 in. long and 1 ft. 4 in. wide, so that it was a wedge-shaped hole. It was 37 ft. distant from stone 30 and exactly opposite. The soil in the hole was humus down to the bottom, and the upper layer ran regularly over it: below that layer the humus contained broken flints, 13 pieces of quartzite (chiefly of hammer-stones), 1 piece of sarsen, and 65 foreign stone-chips. Resting on the bottom were 2 stag-horn picks and 3 entire antlers. It was with difficulty they could be disentangled and were already broken, but it was possible afterwards to preserve two of them. In the soil around these there were 12 more foreign stone-chips, and the presence of these masons' chips proclaimed the hole to be of the Stonehenge period. The second patch of humus towards the west (YY on pl. IX) was next opened, and when excavated revealed a hole almost identical with the first. The depth was the same, the length on the north side 6 ft. 6 in., and on the south side 6 ft. 8 in. The width on the east side was 3 ft. 4 in., and on the west side 3 ft. 7 in. The bottom measurement was 32 in. long and 16 in. wide. The hole was 36 ft. from stone 29 and directly opposite. It contained no special objects, but there were hammer-stones and masons' chips down to the bottom.

There was a sharpness of cutting observable in these two holes which leads me to think that they never held stones, as the sides and edges would have been ruined either by inserting or extracting them. They might have been dug with the intention of putting stones into them, but their presence in the fairway might afterwards have been considered an objection. The presence of the antlers in the first hole is quite sufficient proof that no stone stood in it, and the filling of the holes had been done at one operation. The distance between the holes was 18 ft. 6 in., and by sounding at that

interval others were soon discovered. These places were examined later in turn and proved to be holes of a similar description, but as the tops and sides of them were in a slightly ruinous condition they probably once held stones which had been extracted, perhaps at an early time.

Soon after finding the two holes we came to where, about 12 ft. from stones 29 and 30, the inclines for placing them in position were likely to be found. There were indications on the under surface of the trench of what we supposed to be inclines, and Mr. Newall began upon one in front of stone no. 29. The top of the depression was filled with dirty rubble to 18 in., mixed with flint which had been crushed finer than what had been previously noticed. At this depth the advance was stopped by a wall of solid chalk. This we thought was strange, but a greater surprise was yet to come. The flinty layer was succeeded by a narrow one of earthy matter, and that again by dirty chalk rubble resting on solid chalk. The removal of this soil revealed a hole similar in every respect to the two lately opened, so Mr. Newall's quest of an incline resulted in the discovery of the first hole of another circle outside Stonehenge. Foreign stone chips in this hole decreased in number downwards, and a piece of rhyolite was found actually on the bottom; there was also a stag antler standing vertically at the side with the burr resting on the bottom. The dimensions of the hole were: depth 3 ft. 6 in., top length and width 5 ft. 10 in. by 3 ft. 10 in., and at the bottom 3 ft. 6 in. by 1 ft. 6 in. The bottom was quite level and the corners sharp, which was the case with most of those afterwards found.

The spot noticed on the east was opened and proved to be a hole similar to the others, with the same sharp uniform cutting. The depth of this one was 3 ft. 5 in., the top length and width 3 ft. 10 in. by 3 ft. 10 in., and at the bottom 3 ft. by 7 in. I consider that these holes, as in the case with those at Y, never held stones nor suffered later disturbance for the same reasons as given before.¹

The last two holes were 10 ft. from and opposite to each standing stone, as was the case with those at Y. The only inclines found were those before nos. 7 and 29 stones, and these were examined with the Z holes as they came in rotation. We were aware of these when the big stones were straightened, and the lower parts

¹ The method of distinguishing these holes by letters is a temporary one, and is used because numbering begins east of the axial line and corresponds with that of the standing stones. Holes excavated on the west of that line will receive their numbers when work has been completed round Stonehenge, but at present their number is not absolutely certain, though I feel convinced that they are continuous.

were at that time examined and reported upon. It was now possible to see the upper parts of them down to where they join the concrete bed in which the adjusted stones now stand. The top of the incline of no. 29 occupied about half the width of Z 2 hole, extending a little beyond it to the west. Owing to disturbance in 1921 the definition was not very good, but it was possible to see that the soil from Z 2 hole overlay that of the incline, at the same time showing that the incline had been made first. The incline appeared as a smooth slope cut in solid chalk; over that there was flinty rubble and the usual top layer. It was remarkable for the great quantity of hammer-stones it contained, those of flint being greatly outnumbered by others of quartzite, and it was a veritable dump of the latter. Those that were perfect and others rather less so numbered 62, and there were broken pieces to the number of 214. There were pieces of sarsen in the lower contents, but foreign-stone chips only in the upper.

The incline at no. 7 was more instructive, as the part distant from the stone had not been disturbed. It was examined by opening the Z hole and the incline at the same time, and getting a vertical section across them both, with the dividing ridge of solid chalk appearing in the middle. The overlap in the digging of Z hole could now be clearly seen passing over the ridge and above the contents of the incline, proving conclusively that the Z hole was made after the incline. Additional proof of this is the fact that had the outer stones been placed in position first they would have been an impediment to erecting the larger stones, in fact it would have been an impossibility.

Of the newly found circles, the stone-holes were excavated as far as no. 11, comprising 25 in all. It would make my report too long to narrate the results of opening every hole, but a complete list and description of each one has been prepared, and forms an appendix to this report. The result of every trench also is kept at Stonehenge in a diary of all work carried out hitherto. I will therefore confine the present account to that of one hole only to illustrate the others, and the one selected is interesting: it is Z 4. This hole was well defined, with sharply cut sides and angles, and a level bottom; the depth was 41 in. The upper layer contained the usual mixed remains and descended about 14 in. At a depth of 18 in. there was dirty soil mixed with traces of burnt matter, and immediately below it were several fragments of charred wood. When these were removed there could be seen a fairly level place holding natural flints of moderate size upon it, indicating a roughly improvised hearth. About the same level there were 42 pieces of a black pot with plain round,

beaded, wide mouth. Below this there were 3 pieces of fine gritty pottery at 24 in. below ground level, and the dark earth from the top was continued down the middle of the hole nearly to the bottom, surrounded by earthy chalk rubble. Many roughly worked flints occurred as far down as 27 in., and broken fragments of the same were continued at a still greater depth. Foreign stone fragments were found as far down as 37 in., and there was a piece of Bronze Age pottery on the bottom. The disturbance of the hole points to its being early, perhaps as far back as the Roman period, perhaps even earlier than that, but the stones may have been extracted at various times, so it would be better to wait until more of the holes have been examined before drawing definite conclusions about them. In work of this sort it does not do to theorize and make assertions, for they may be refuted in a moment by an unexpected discovery. Looking at the arrangement of the circles on the plan, we may notice that as far back as Z 7 there was uniformity in the space measurements in that circle, but in the Y circle they become variable after Y 3 and continue so. It may be also noticed that although the Z holes begin at equal distances from standing stones they diminish in distance up to Z 7. In the case of the Y holes this is even more marked. The variation in the Z circle shows a decrease of 4 ft. between YY and Y 7, so that the curves they describe are neither concentric with the Stonehenge circle nor with each other. Later they may be found to be elliptical, but until the west side is excavated this cannot be verified. A great deal of confusion was noticed in the area where these irregularities culminated. The digging of Y 7 hole was found to have been only partly carried out, and it is very doubtful if the shallow depression (only 25 in. deep) could ever have held a stone. The intention perhaps had been to make a hole similar to the others, but for some unknown reason it was not carried out. Again, hole Z 8 was found to be missing. The vicinity where it should have been was searched with the hope of finding it, but without success, nor was it secreted under the fragments of the fallen stone no. 8.

A considerable area was laid open here and proved interesting. The upper layer descended 14 in., followed by 4 in. of dirty chalk rubble, and between it and solid chalk there was a stratum of fine dirty pasty chalk which had a level surface as if trodden level by passage over it. There were many chips of all the known kinds in the upper layer, including one or two of micaceous sandstone, and a profusion of sarsen chips from the destruction of 8 and 9 stones. Some detached pieces were about 20 lbs. to 30 lbs. in weight, and nearly protruding through the surface of the ground.

The place had been infested by rabbits, which had burrowed around and under the fallen stones. Many post-holes were found here, most of them large and of the same symmetrical round form and calibre as those on the causeway and near the Helestone, and may have been of the same period. There were chips in the soil above them but not in them, and they contained nothing but fine dirty chalk rubble, except in one instance, where 10 small pieces of animal bones occurred. They varied a little in width but more so in depth, which was from about 19 in. to 23 in. Some were dotted about apparently without reference to anything that we could see at the time, but five formed a line with intervals of 3 ft. between them. One at the south end of the line had been cut into by digging Z 9 hole, showing the post-hole to have been pre-existent. The use of them is yet unknown, but it is hoped that the present season's work may throw some light upon this confused area. As an ending to the season's work six more holes of both circles, from 9 to 11, were opened and found to be much the same as the previous ones, except that Y 11 had more abrupt sides. In the upper layer about Y 10 a coin of Magnentius was found, and near it a pendant, evidently a pierced coin, which had been worn so long that no impression remained. In the same layer near Y 10 a number of small pieces of Romano-British pottery, 105 in all, was found, and not far from them a coin of Drusus. When excavating Y 9 a large post-hole was found at the side of it, and it had been cut into when that hole was made. Another appeared about a foot from the Y 10 hole. To find out if there were any more of these holes more ground was opened, and the place proved even more interesting than that at Z 9. Eleven post-holes were found in a line at short intervals apart. They were similar to those at Z 9 area, and the soil conditions around them much the same. They gave the impression of having held posts of a building, but no return of the line from them could at that time be seen. It is hoped that in the present season's work their extent and use may be discovered. The two end holes of the row towards the north-east had been united by digging to form a grave containing the bones of an adult person. The depth of the grave was that of the post-holes, namely 26 in. below ground level. The length was 5 ft. 4 in., and the width at the upper end 24 in., and at the lower end 17 in. It was roughly cut in the solid chalk and barely large enough to contain the body, so that the neck and shoulders were forced into the grave, pressing the ribs together, and causing a very broken condition. The skull was broken owing to its being slightly above the side of the grave and only 16 in. below the surface of the ground. After restoration it

measured between uprights $7\frac{7}{8}$ in. from the back of the cranium to the frontal bone, and $5\frac{1}{2}$ in. between the temporal bones. The soil filling the grave was probably that dug from it and returned: it was much compacted by pressure, and of a nature different from that filling the post-holes.

There were three stone chips in a layer above the grave, but the soil in the grave after sifting showed it to contain no object of any sort. The skeleton has been sent to the Royal College of Surgeons, and Sir Arthur Keith has very kindly given me his opinion about it. He pronounces it to be the skeleton of a man and of a type he has become familiar with, occurring in the period about the time of the Roman occupation, or more probably in the centuries immediately preceding it. His opinion is verified by our finding many objects of Romano-British times in the same area as the grave: moreover, three pieces of gritty pottery found in hole Z 4 have been recognized by Mr. Reginald Smith as belonging to the La Tène period. It may be remembered that this quarter of Stonehenge produced many objects of the Roman period from the top layer about no. 7 stone when it was being set straight. Perhaps a Romano-British squatter and his family made their abode in that quarter. I have found several burials in British villages associated with the Roman period, buried lengthwise and sometimes with the nails of wooden coffins along the sides of the grave, and the hobnails of their shoes at the foot of the grave, but the skulls were not dolichocephalic like this one. The length of it made me believe it to be Neolithic until I had Sir Arthur Keith's opinion, which I am convinced is right. I have not had experience of La Tène remains, but have since learnt that they were a long-headed race. It would be interesting to know whether this distinguishing trait had always existed amongst them, or whether it was a survival or recrudescence of an earlier race, just as the Cro-Magnon is supposed to have reappeared amongst the Gallo-Romans.

I think it can be inferred that the grave was made after the purpose of the post-holes ceased to exist, for it is obvious that the posts could not have been there when the body was placed in the grave as there was barely room for it. As this spot came under observation at the close of the season the area could not be explored any farther, but now, after some preparations at present going on, much more of it will be laid bare, and there are reasons to hope it will provide some interesting matter for the next report.

The fallen stone lying upon the rampart on the east came into the system of trenches and was examined. There was a great deal of disturbed soil about it owing to a former excavation early last century. This had been carried down to about 2 ft., but did not

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reach the solid chalk in the stone-hole, neither had it touched the sides, so when the undisturbed portion was removed a good view of the base of the stone and definition of the hole was obtained. It was a roughly quarried block of sarsen with no appearance of dressing or shaping. The thickness of the stone was 3 ft. at the side and 3 ft. 8 in. across the front. The length of it was 9 ft., and it may once have been a little longer, as it appears to have been knocked about. The depth of the hole was 4 ft. below the surface: the width from north to south nearly 7 ft., and from east to west 4 ft. 8 in. In the undisturbed soil a piece of much decayed stag antler was found, the largest fragment lying close to the stone. In the disturbed soil there were fifteen stone chips and three pieces of Romano-British pottery which probably had dropped from a higher level when the stone fell over. On the bottom there was a layer of chalky dirt, very much hardened by the compression of the stone. There was no sign of a trench ever having existed around the outside of the stone, and data were not sufficient to help in fixing a period for it, but I think it might date about the time of Stonehenge or a little before.

Cremations were met with when the trenches came near the rampart, and were found mostly at the foot of the inner slope and sometimes a few feet from it. They were chiefly small and insignificant little collections, many of them perhaps of children, but some with larger bones occurred occasionally. None of the deposits was large enough to be the entire cremation, and as burnt wood ashes were hardly noticed amongst them it is possible that they were brought here for interment. They were so near the surface that frequently the greater part of them lay in the turf when cut and turned over, the remainder being in the loose rubble below it; rarely was there a sign of a cist in the rubble. Only on one occasion has anything been found with them, but this was one which went far to make up for the poverty of the others. It occurred this season and should rightly come into next season's report, but finds have been so infrequent that perhaps I may be excused for producing it this evening. It is a beautiful little polished mace-head of the 'cushion' type found amongst the bones of a cremation like the others, but with a shallow cist scraped 2 in. deep in the chalk rubble. It was 7 in. below the surface and 5 in. wide, but not deep enough in the more solid ground to cover all the bones, and some protruded into the soil above the cist. I sent the mace to Dr. Thomas and he tells me that the stone is hornblendic gneiss, and that the nearest locality where it is found is in Brittany, but that it occurs in Scotland. The hole through it is cylindrically bored and not of the 'hour-glass' pattern,

although it can be just seen to have been bored from both sides. It is a beautiful specimen of patient grinding and polishing, and the trueness of the boring is quite wonderful when it is remembered that there was only sand and a revolving cutter of wood or bone held in a bow drill for making it. Mr. Newall searched for occurrences of this type of implement, and found that there are eight others known in collections, 5 from Scotland, and 3 from the Thames and its neighbourhood. It is of the Bronze Age and probably for ceremonial use. I believe that a stone axe is used to this day in ceremonies in some part of the Gold Coast.

Some of the trenches produced things in the upper layer of comparatively late date. In one small area there were pieces of Norman pottery with green glaze and ornament like those found at Old Sarum, also two iron arrow-heads, a knife blade, and the chape of a sword scabbard.

Another trench gave a beautiful silver coin of Ethelred in fine condition and minted in London, also a silver leather ornament and a groat cut to make a half-groat. The number of masons' chips found when excavating the north-east quadrant was 864 of sarsen and 3911 of foreign stones with a preponderance of foreign over sarsen of about 4.5 to one. This is worth quoting because it not only points to the foreign stones being dressed on the spot, but indicates much reduction in size, and also that originally there were more than have been hitherto accounted for. If the newly found holes held stones, as I think they must have done, their shape suggests that they were made for foreign stones like nos. 31 and 49 of the second circle. The number of chips just quoted is only a very small proportion of the quantities already found and numbered in places that were excavated.

In concluding my report I should like to record my best thanks to Sir Arthur Keith and to Dr. Thomas for the opinions and much valued information they have given; to Sir Frank Baines and his staff at the Office of Works for the plan and the careful survey, and last but by no means least to my very able colleague Mr. Newall, who has frequently given me very valuable help.

DISCUSSION

Rev. G. H. ENGLEHEART was in a position to appreciate better than most Colonel Hawley's patience and thoroughness at Stonehenge, and thought that few would continue working on Salisbury plain in all weathers through a long season. The questions when, by whom, and what for, could not at present be answered; but every word of the report seemed to show that the monument dated within the Neolithic period, which was of great but uncertain duration. There seemed to

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have been alterations and restorations at Stonehenge, but in his opinion all preceded the age of Bronze. The cremations were not contemporary with the stones that once stood in the Aubrey holes, but were placed there later owing to a desire to be near a venerated monument. In Brittany stone axes and cremated remains had been found against a menhir. The excavations at Stonehenge had, he thought, finally disposed of all theories about orientation and sun-worship. He suggested that the two new rings of stones should be named after Colonel Hawley and Mr. Newall, to distinguish them from the Aubrey holes beyond them. Mr. Cunningham of Devizes had unearthed a letter of his ancestor the first William Cunningham, which stated that a blue stone belonging to the monument had been found in an intact long barrow, evidently of the Neolithic period, which lay on the shortest route from Prescelly mountain to Stonehenge.

Sir HERCULES READ referred to the suggestion made last year that the report should open with a summary of the work done during the season, reference to the plan showing the points at which excavation had been resumed. Mr. Engleheart, who had frequent opportunities of visiting the site, had supplied an open-air outlook and a wider scope to the necessary details furnished by Colonel Hawley; and his independent view of Stonehenge commended itself to the speaker's own judgement. Professor Gowland as a metallurgist had been primarily interested in metals, and had based much on a stain of bronze on one of the stones; but Stonehenge owed its construction to the religious beliefs of centuries, and such a system of circles implied combined effort over a long period, with a continuity of race and belief. As a member of the original Stonehenge committee, he had pleasure in testifying to Colonel Hawley's self-sacrifice and indomitable energy in spite of the advance of years; and felt that the Society would readily join in expressing gratitude for another season's work.

Mr. DALE said one of the coins exhibited was a halfpenny of the short-cross type of Edward I or III: another was a fine specimen of Ethelred II, weighing about 24 grains and bearing a London moneyer's name. He thought the perforated stone was Neolithic rather than Bronze Age, the hole being drilled straight without spreading at each end. The implement of rhyolite was of special interest, but he saw no proof of a Neolithic date for Stonehenge.

Mr. CRAWFORD said the perforated hammer resembled one found by Professor Bryce in one of the long cairns of Arran: in Scotland it would therefore date from the Stone Age, and had a bearing on the chronology of Stonehenge. Incidentally it showed that the burnt interment it was found with was unusually early. A Neolithic date was supported by the post-holes shown on the plan, as the plan of a Neolithic fort at Urmitz near Coblenz in Germany published in *Prähistorische Zeitschrift*, ii (1910), p. 13 showed the enclosure surrounded by a double fosse interrupted by causeways of soil or rock which were pitted with small holes, perhaps to support a wooden tower at each opening. Causeways had also been found at Windmill

Hill near Avebury, where the pottery sherds resembled some found at Knap Hill by Mr. and Mrs. Cunnington, who considered them Neolithic. He was inclined to agree with Mr. Engleheart that the course of the avenue ruled out any theory of orientation.

Professor MYRES thought the indeterminate holes mentioned in the paper might have been caused by trees, and such an explanation could be easily tested by a small excavation in the neighbourhood.

Mr. REGINALD SMITH remarked on the unexpected presence and surprising regularity of the series of holes, which radiated from the centre and might be presumed to continue round the circle. The discovery of a skeleton might prove to be important, but the first requisite was a full and conclusive anatomical report. The Helestone was shown to be in place, within a circular trench; but it was difficult to see how such a fixture would allow traffic along the Avenue. If it was earlier than Stonehenge, why was the Avenue not planned to one side or the other? A peculiarity of the cushion-shaped hammer-head was the absence of a cutting-edge; and others made of ornamental black and white stone, blunt at both ends, had been found in Scotland, the Orkneys and Shetlands, and also in the Thames (*Archaeologia*, lxi, 8). Their distribution had to be explained, but the straight boring was more likely to date from the Bronze Age, as it was an advance on the hour-glass perforation, and implied an instrument of metal. The flints from the floor of the ditch were remarkable in having very little of the original stone visible in a cross-section; and the change from black to white had apparently been hastened by contact with the chalk.

The PRESIDENT returned the Society's thanks to Colonel Hawley and his colleagues for the admirable work done at Stonehenge. Such patience and accuracy would serve as a model in all branches of research; and abstention from theorizing was in itself commendable, but the time seemed to be approaching when controversial points would come under discussion, and Colonel Hawley's personal ideas might by that time be found to have crystallized into facts.

APPENDIX

An account of twenty-five of the Y and Z Holes with depths, measurements, and contents.

The abbreviation 'B.G.L.' means 'below ground level'.

The abbreviation B.A. means Bronze Age.

The abbreviation R.B. means Romano-British.

'Bottom measurements' means length and width of the bottom of the hole.

Holes in the additional Circles Y and Z.

HOLE YY. Excavated 14th June 1923.

Depth, 37 in. Length north-east side, 6 ft. 6 in. Length south-west side, 6 ft. 8 in. Width east side, 3 ft. 4 in. Width west side, 3 ft. 7 in. Bottom measurements, 32 in. by 16 in.

A rectangular oblong hole; sides and corners sharply cut. The sides slope towards the bottom, making a wedge-shaped hole. The soil filling the hole was chiefly humus with a quantity of broken flints at the top, continuing more or less flinty throughout, and also chips of Sarsen and foreign stone.

*Contents.**First layer to 20 in. B.G.L.*

Quartzite pieces, 27.

Sarsen, 11.

Rhyolite, 28.

Diabase, 47.

Shale, 11.

Roughly worked flints, 19.

Piece of Rhyolite, wedge shaped and used.

1 Pebble.

1 Small fragment of R.B. Pottery.

3 Coarse pieces of pottery, period indefinite.

Second layer from 20 in. to bottom.

Quartzite pieces, 2.

Rhyolite, 2 small pieces.

2 Chips with smooth edge, found at 28 in. B.G.L.

A well-made hammer-stone at 22 in. B.G.L.

HOLE Y. Excavated 14th June 1923.

Depth, 37 in. Top length, 60 in. Top width, 37 in. Bottom measurements, 32 in. by 16 in.

A rectangular oblong hole, the sides and corners sharply cut. The sides slope to the bottom and make a wedge-shaped pit. The soil in the hole chiefly humus with a quantity of crushed or broken flint at the top; more or less flinty throughout. Contained chips of Sarsen and foreign stone, mostly on top, and diminishing towards the bottom. There were five stag antlers resting on bottom of pit—they were entangled and difficult to remove. Two of them might have been picks, all were broken. Two have been put together and preserved.

*Contents.**First layer to 20 in. B.G.L.*

Quartzite pieces (chiefly hammer-stone fragments), 13.
 Sarsen do., 1.
 Rhyolite, 26.
 Diabase, 18.
 Shale, 7.
 Roughly worked flints and hammer-stones, 16.

Second layer from 20 in. to bottom.

Quartzite, 2 (one a hammer fragment).
 No Sarsen.
 Rhyolite, 5.
 Dolerite, 5.
 Shale, 2.
 Roughly worked flints, 5.
 A small, very smooth pebble.
 A fragment of coarse pottery.

HOLE Y. 1. Excavated 18th June 1923.

Depth, 38 in. Length at top, 72 in. Width at top, 34 in. Bottom measurements, 36 in. by 20 in.

A rectangular hole of the same shape as the two first found. The upper edges are more uneven, as if a stone had been extracted. Earthy flinty humus of rather a reddish shade to 24 in. B.G.L. Earthy chalk rubble was met below this level as a patch extending from the centre to the south-west side. On the other sides the humus was continued. Below this, chalk rubble became general, and continued increasing in width until it covered the bottom entirely for 4 inches. There was a piece of Rhyolite 4 inches from the bottom and two pieces at 2 inches. These were the only chips found below 20 in. B.G.L., but before this they had been plentiful.

*Contents.**Excavated as one layer.*

Quartzite pieces, 13.
 Sarsen do., 11.
 Rhyolite, 26.
 Dolerite, 40.
 Shale, 11.
 Glauconite, 2 small pieces.
 Worked flints, 12.

Pottery, B.A., 8 (1 piece ornamented, 2 thick pieces).
 Pottery, R.B., 9.
 An iron nail (R.B.?).
 Many bone fragments in upper part.
 Two pieces Quartzite hammer-stone.

HOLE Y. 2. Excavated 18th June 1923.

Depth, 27 in. Length at top, 70 in. Width at top, 60 in. Bottom measurements, 30 in. long by 18 in. wide.

Of the same shape as the previous ones, but irregular at the top and a little ruinous there; the bottom sides were quite sharply defined. Flinty humus extended down to 24 in. B.G.L., followed by earthy chalk rubble (with preponderance of chalk) extending to the bottom. There were no chips in the lower chalk rubble. There were foreign stone chips at 35 in. and 38 in. B.G.L. A lug of a pot at 18 in. B.G.L.

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(coarse and hand made). A small fragment of Dolerite implement, perhaps an axe end, at 22 in. B.G.L.

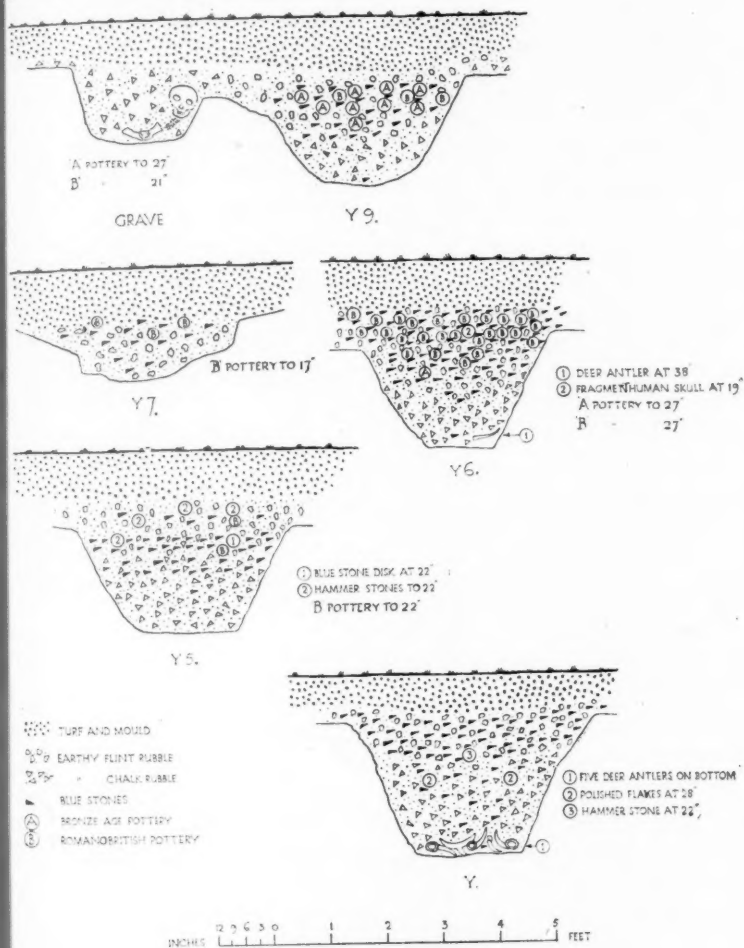


FIG. 2. Sections of Y Holes.

Other Contents

Quartzite pieces, 10 (one a hammer-stone).
Sarsen, 2.
Rhyolite, 14.
Dolerite, 17.
Shale, 4.

Worked flints, 10.
Pottery, undefinable, 2.
Ring (R.B. ?) at 18 in. B.G.L.
Dolerite fragment of an implement (mentioned above).

HOLE Y. 3. Excavated 19th June 1923.

Depth, 33 in. Top length, 70 in. Top width, 56 in. Bottom measurements, 28 in. by 42 in.

Similar in shape but not so regular as the first holes. Flinty humus down to 30 in. B.G.L., followed by humus and chalk, the latter increasing in quantity and becoming dirty chalk rubble.

Two pieces of thick B.A. sepulchral pottery were found at 18 in. B.G.L. and a larger piece at 17 in., another large piece at 25 in., and another at 31 in. A piece of foreign stone nearly on the bottom, at 31 in. B.G.L., and a piece of R.B. at 30 in.

Other Contents.

Pieces of Quartzite, 12.

Do. Sarsen, 3.

Rhyolite, 19.

Shale, 8.

B.A. Pottery, 14 (including above).

R.B. Pottery, 6 (including above).

Part of a small iron object.

Bones and teeth of animals, 8.

HOLE Y. 4. Excavated 19th June 1923.

Depth, 33 in. Top length, 68 in. Top width, 52 in. Bottom measurements, 42 in. by 22 in.

Flinty humus down to 32 in. B.G.L., changing afterwards to dirty chalk rubble. There was a small amount of compacted rubble at the south end, and rather mealy chalk. There was an irregular cavity on the north-west corner, probably rabbit disturbance. A human molar tooth was found at 18 in. B.G.L. on the side. Two pieces of B.A. Pottery similar to those in the last hole and probably of the same vessel.

Other Contents.

Quartzite pieces, 5.

Sarsen do., 7.

Rhyolite, 22.

Dolerite, 15.

Shale, 4.

Flint hammer-stones, 6.

B.A. Pottery, 2 (mentioned above).

R.B. pottery, 7.

Pointed bone at 18 in. B.G.L.

HOLE Y. 5. Excavated 8th October 1923.

Depth, 38 in. Top length, 65 in. Top width, 46 in. Bottom measurements, 34 in. by 23 in.

Similar in shape to the others, but top rather ruinous. Humus extended around the top of the hole for five or six feet on all sides, being similar to that over and in the hole. Except over the hole it contained no chips. Lower humus was nearly devoid of flints.

First Layer to 17 in. B.G.L.

Rhyolite, 3. Dolerite, 1. Shale, 1. R.B. Pottery, 1 piece.

Second Layer to 22 in. B.G.L.

Entering the hole at solid chalk level. Soil consisted of humus with a little chalk and a few natural flints. It contained: Quartzite

pieces, 1. Rhyolite, 10. Dolerite, 9. Shale, 4. R.B. Pottery, 1. A well-made hammer-stone. Fairly well worked flints, 2.

Third Layer to 28 in. B.G.L.

In earthy soil with chalk and becoming more chalky. It contained: Rhyolite pieces, 4. Dolerite, 6. Shale, 3. Volcanic ash, 1. Worked flints, 3.

Fourth Layer to 33 in. B.G.L.

In dirty chalk rubble. Contained a piece of Rhyolite rounded and dressed at the edge at 33 in. B.G.L.

Fifth Layer to 38 in. B.G.L.

In chalky rubble to the bottom. No objects.

HOLE Y. 6. Excavated 8th October 1923.

Depth, 41 in. Top length, 60 in. Top width, 42 in. Bottom measurements, 38 in. by 15 in.

Similar in shape. Disturbed at the top. Accumulation of humus around the top of hole like the last, but of less extent.

First Layer to 19 in. B.G.L.

Humus, becoming rather chalky down to 19 in. It contained: Quartzite pieces, 3. Sarsen, 1. Rhyolite, 24. Dolerite, 14. Shale, 5. Volcanic ash, 2. A fragment of human skull. Piece of Twelfth-century Pottery. R.B. Pottery, 22. Flints, 4.

Second Layer to 27 in. B.G.L.

From where hole enters solid chalk. Humus with a little chalk and many broken pieces of flint. It contained: Quartzite pieces, 2. Sarsen, 2. Rhyolite, 12. Dolerite, 9. Volcanic ash, 3. Pottery, B.A., 1. Do. R.B., 4. A large piece of Dolerite with edge showing usc.

Third Layer to 33 in. B.G.L.

In earthy flint rubble. There was chalk in it towards south end with no flints. No objects.

Fourth Layer to 41 in. (Bottom).

In earthy chalk. A stag antler at 38 in. B.G.L. A chip of Rhyolite at 38 in. Nothing lower than 38 in.

HOLE Y. 7. Excavated 11th October 1923.

Depth, 25 in. Length, 55 in. Width, 36 in.

This hole was found to have been begun but not finished. The direction of the cutting of the hole took the circumferential curve of the Stonehenge circle, as do all the others, but the outline of the top was indistinct.

First Layer to 17 in. B.G.L.

In earthy matter mixed with broken flints. It contained: Quartzite pieces, 1. Rhyolite, 5. Sarsen, 1. Dolerite, 4. Shale, 1. R.B. Pottery, 3 pieces. 1 Rough flint.

Second Layer to 25 in. B.G.L.

In the same kind of soil to a depth of 6 in. It then suddenly became very chalky, and this loose chalk reached to the bottom. It contained (in the humus layer only): Sarsen chips, 2. Rhyolite, 2. Dolerite, 1.

HOLE Y. 8. Excavated 15th October 1923.

Depth, 35 in. Top length, 66 in. Top width, 47 in. Bottom measurements, 38 in. by 22 in.

A hole like most of the others. Top a little ruinous, but lower part well defined.

Top Layer to 17 in. B.G.L.

Chiefly in humus. It contained: Sarsen pieces, 53; most of them large pieces from the destruction of No. 8 Stone. Rhyolite, 12. Dolerite, 4. B.A. Pottery, 2. R.B. Pottery, 38. A modern horse-nail. 3 Flint hammers. A flint implement (scraper).

Second Layer to 24 in. B.G.L.

In humus mixed with broken flint. It contained: Quartzite pieces, 2. Sarsen, 7. Rhyolite, 10. Dolerite, 7. Shale, 3.

Third Layer to 30 in. B.G.L.

In humus with flints; a little chalk beginning to appear in it; very chalky at sides. It contained: Quartzite chips, 1. Sarsen, 2. Rhyolite, 3.

Fourth Layer to 35 in. (Bottom).

In dirty chalk rubble. A chip of Rhyolite at 34 in. B.G.L.

HOLE Y. 9. Excavated 16th October 1923.

Depth, 37 in. Top length, 72 in. Top width, 30 in. Bottom measurements, 50 in. by 21 in.

This hole, though similar to others, proved larger and deeper. A recess at the side proved afterwards to be Post-hole 3, Area 2.

First Layer to 21 in. B.G.L.

In humus with broken flints. It contained: Quartzite pieces, 5. Sarsen, 1. Rhyolite, 7. Dolerite, 5. Shale, 2. 1 Worked flint. B.A. Pottery, 8. R.B. Pottery, 3. Bird bone (duck). Animal tooth. 5 Bone fragments.

Second Layer to 27 in. B.G.L.

In humus with flints; earthy chalk seen on north edges; humus dips to south-east corner of hole. It contained: Quartzite pieces, 9. Rhyolite, 3. Dolerite, 3. Shale, 2. 1 Piece R.B. Pottery.

Third Layer to 34 in. B.G.L.

In dirty chalk, more earthy on north side. Still a little humus on south side, but changing soon to dirty chalk like that on north side. It contained: Quartzite pieces, 2 (in the humus); nothing in the chalky soil.

Fourth Layer to 37 in. (Bottom).

In white chalky matter. At the bottom there was a Rhyolite chip.

HOLE Y. 10. Excavated 7th November 1923.

Depth, 37 in. Top length, 64 in. Top width, 48 in. Bottom measurements, 38 in. by 24 in.

A rather large hole of the same description as others lately found.

Top Layer to 19 in. B.G.L.

In humus with a few broken flints. It contained: Sarsen pieces, 9. Quartzite, 4. Rhyolite, 4. Dolerite, 4. Shale, 2. Volcanic ash, 1. R.B. Pottery, 5. A coin of Magnentius. A coin worn as a pendant, with hole in it, completely defaced. Coins were immediately under the turf.

Second Layer to 26 in. B.G.L.

In humus with broken flints, becoming rather chalky on east side. It contained: Quartzite pieces, 2. Sarsen, 1. Rhyolite, 6. Dolerite, 6. Shale, 1.

Third Layer to 32 in. B.G.L.

In chalky humus, rather more chalky on east side. It contained: Quartzite pieces, 5. Sarsen, 4. Rhyolite, 3. Dolerite, 3. 3 Very rough Quartzite hammers.

Fourth Layer to 37 in. (Bottom).

In coarse earthy chalk. It contained one piece of Sarsen.

HOLE Y. 11. Excavated 31st October 1923.

Depth, 43 in. Top width, 53 in. Top length, 66 in. Bottom measurements, 33 in. by 23 in.

Of similar shape, but with more abruptly slanting sides.

First Layer to 20 in. B.G.L.

In earthy and rather chalky humus. A quantity (104) of pieces of R.B. Pottery came from a definite layer at 15 in. B.G.L. Sarsen chips, 3. Rhyolite, 7. Dolerite, 4. Shale, 4.

Second Layer to 27 in. B.G.L.

In similar rubble but rather more chalky. It contained: Sarsen chips, 1. Rhyolite, 6. Dolerite, 2. Shale, 1. A large thick piece of B.A. pottery, and a base of a pot (undefinable).

Third Layer to 33 in. B.G.L.

Humus and chalk rubble similar to the last, but becoming more chalky. It contained: Rhyolite chips, 3. Dolerite, 3.

Fourth Layer to 40 in. B.G.L.

In earthy chalk; chiefly chalk. Contained: 1 Piece Sarsen. 1 Rhyolite.

Fifth Layer to 43 in. (Bottom).

In the same kind of earthy chalk. The corners are earthy only. It contained: Sarsen, 1. Quartzite, 1. Rhyolite, 2.

The 'Z' Holes.

HOLE ZZ. Excavated 27th June 1923.

Depth, 43 in. Top length, 74 in. Top width, 48 in. Bottom measurements, 42 in. by 18 in.

The holes of the Z circle are identical in shape and other characteristics with those of the Y circle. The first Z hole was found by Mr. Newall when searching for the incline to no. 29 Stone. Progress towards the stone was stopped at about 18 in. B.G.L. by a barrier of solid chalk; by following the side of this down the stone-hole was disclosed.

First Layer to 18 in. B.G.L.

In very flinty earthy rubble. Crushed flint covered the whole of the upper part of the layer and was a continuation of that bed which began soon after passing the entrance, and is mentioned in an early Report as surrounding Stones nos. 29 and 30. After 18 in. there was a narrow layer of earthy matter without flints, and after this dirty chalk rubble continued to the bottom. A chip of Rhyolite at 32 in. was followed by an interval without any until the bottom was reached, when there was one Rhyolite chip upon it. There was an antler on the east side of the hole. It stood upright with the burr on the bottom.

General Contents.

Quartzite pieces, 40.
Sarsen, 15.
Rhyolite, 30.
Dolerite, 37.
Shale, 16.
An iron fibula.

Roughly worked flints, 17.
Small piece of a hone (top layer).
Piece of marly black stone.
A stag antler.
A roughly worked piece of Rhyolite on the bottom.

HOLE Z. Excavated 28th June 1923.

Depth, 41 in. Top length, 70 in. Top width, 42 in. Bottom measurements, 36 in. by 7 in.

This hole was very sharp and uniform in cutting, like the last and like the first two Y holes. The bottom was very narrow, and intended for a flat narrow stone, but neither of these holes could have held stones. The first layer taken out resembled that of the last hole exactly, and reached 15 in. B.G.L. This was followed by earthy chalk rubble to the bottom. Foreign-stone chips were present throughout the filling and a piece of Rhyolite was found at 39 in. B.G.L. and almost on the bottom.

Contents.

Quartzite pieces, 11.
Sarsen do., 1.
Rhyolite, 15.
Dolerite, 22.
Shale, 4.
B.A. Pottery, 1. } Top layer.
R.B. do., 1. }

9 Rough flints, chiefly hammer-stones.
1 Fragment of animal bone at 31 in. B.G.L.
A flat piece of Shale about 1 in. diam. at 24 in. B.G.L. It was roughly rounded and much rubbed on the edges.

HOLE Z. 1. Excavated 28th June 1923.

Depth, 42 in. Top length, 70 in. Top width, 46 in. Bottom measurements, 36 in. by 15 in.

A hole similar in shape but much rougher than the first two and probably disturbed by extraction of a stone. Very flinty rubble was

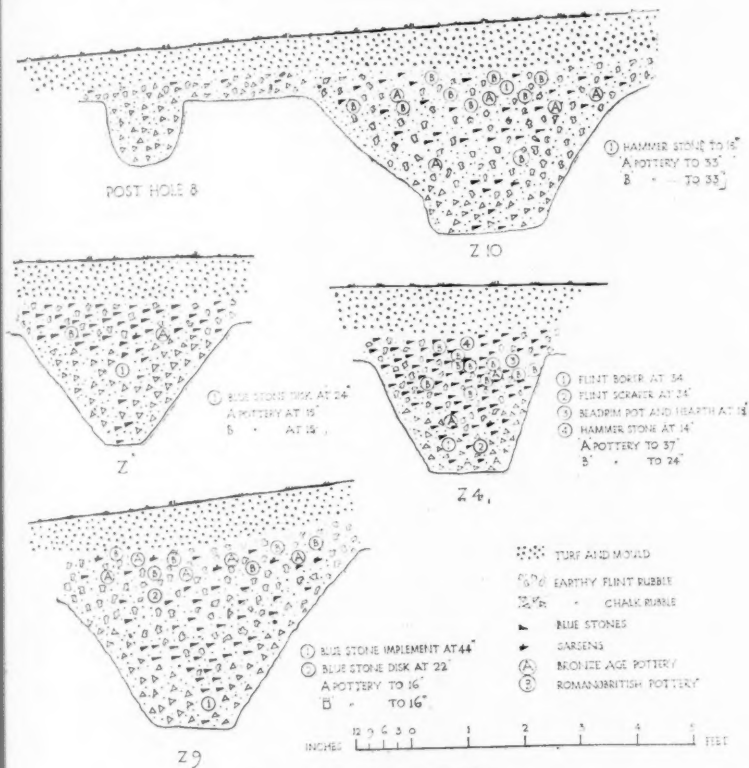


FIG. 3. Sections of Z Holes.

first met with, extending to 22 in. B.G.L. Below this there was earthy chalk rubble, gradually holding more chalk and bigger lumps, as far as the bottom. A lump of Sarsen occurred at 32 in. B.G.L. in the chalky rubble, and there were foreign-stone chips in the same rubble. A piece of Rhyolite was upon the bottom. The west end of the bottom was wider than the east end and the sides were rounded away.

Contents.

Quartzite pieces, 18.
Sarsen do., 9.
Rhyolite, 17.
Dolerite, 11.
Shale, 7.

Roughly worked flints, 12.
Animal bone fragments (several).
A piece of pottery (R.B. or doubtful).
ful).

HOLE Z. 2. Excavated 29th June, 1923.

Depth, 41½ in. Top length, 70 in. Top width, 45 in. Bottom measurements, 30 in. by 14 in.

This hole was very much like the preceding. There was flinty and earthy rubble down to 18 in. B.G.L. Below that level there was earthy rubble to 36 in. B.G.L., followed by chalky rubble to the bottom.

Contents.

Quartzite pieces, 24 (including broken hammers).
Sarsen do., 15.
Rhyolite, 17.
Dolerite, 15.
Shale, 13.
R.B. Pottery, 4 (doubtful pieces, 2).
Quartzite hammer-stones, 3.
Piece of iron ring (top layer).

B.A. Pottery, 2.
A dog's tooth and various bone fragments.
A piece of smoothed Dolerite.
A piece of ironstone at 39 in. B.G.L.
Rough flints, 7.
A small snail shell on bottom.

HOLE Z. 3. Excavated 19th September 1923.

Depth, 39 in. Top width, 34 in. Top length, 72 in. Bottom measurements, 40 in. by 16 in.

A hole of the usual shape and character. First layer excavated was in dirty humus with a little chalk and extending to 24 in. B.G.L. Below this there was reddish-brown earth mixed with very coarse chalk rubble to 32 in. The same kind of soil reached to the bottom, but contained more chalk after 32 in. At the sides there was pasty chalk mixed with dark earth. A fragment of Romano-Gallic ware was found at 21 in. B.G.L., also a boot clasp of the same period. To 21 in. chips were fairly plentiful; after that mark very few appeared, but there was one of Dolerite at 30 in. B.G.L. Many chips again appeared at mark 30 in. and on the north-west end and on the bottom. A well-rounded Quartzite hammer-stone was found at 27 in. B.G.L. and some rough flint hammers.

Contents.

Quartzite pieces, 2.
Sarsen do., 5.
Rhyolite, 25.
Dolerite, 26.
Shale, 5.
Volcanic ash, 12.

B.A. Pottery, 9.
R.B. do., 7.
1 Boot clasp.
1 Quartzite hammer-stone.
8 Roughly worked flints.

HOLE Z. 4. Excavated 24th September 1923.

Depth, 41 in. Top length, 60 in. Top width, 36 in. Bottom measurements, 40 in. by 16 in.

The upper rubble was of dirty earthy and flinty soil, containing all sorts of remains, modern and earlier, to 14 in. B.G.L. This was 'top layer'. At 18 in. B.G.L. there was blackened earth with traces of wood ash, and immediately under it several fairly large pieces of charred wood. A fairly level line of rough natural flints spread over the soil seemed to indicate the formation of a hearth. At this level, and a little below it, there were pottery fragments, numbering 42, of a black pot with plain round, beaded, wide mouth. At 24 in. B.G.L. there were three pieces of fine gritty pottery. Many roughly worked flints occurred as far down as 27 in., and pieces of flint hammer-stones. Foreign-stone fragments were continually found, and reached as far as 37 in. B.G.L. One roughly worked flint was found at 34 in. B.G.L., and one piece of B.A. pottery on the bottom. Dark earth from the top reached to the bottom, through the centre of the other soil filling the hole becoming attenuated in its course downwards; around it there was dirty chalk rubble to the bottom.

Contents.

Pieces of Quartzite, 10.
Do. Sarsen, 12.
Rhyolite, 28.
Dolerite, 31.
Shale, 7.
Volcanic ash, 4.
Roughly worked flints, 23.
B.A. Pottery, 4.

R.B. Pottery, 10.
Fragments of a black pot, 42.
Do. of another, 2.
Medieval Pottery, 2 (top layer).
1 R.B. iron horse-nail.
1 Flint borer.
1 Do. scraper.

HOLE Z. 5. Excavated 25th September 1923.

Depth, 40 in. Top length, 72 in. Top width, 38 in. Bottom measurements, 42 in. by 15 in.

Shape and character similar to the others generally. Top layer similar to the last hole and to 14 in. B.G.L. Fragment of a skull of some large animal with very large eye socket was found at 28 in. B.G.L. The dirty rubble changed to chalky rubble at 26 in. B.G.L. A piece of foreign stone was found at 38 in. B.G.L. In the top layer there were twenty pieces of R.B. pottery, some of which may belong to the pieces with the round rim found in Z. 4.

Contents.

Quartzite pieces, 14.
Sarsen do., 7.
Rhyolite, 14.
Dolerite, 16.
Shale, 9.

Pottery, B.A., 1 small piece.
Do., R.B., 20.
Fragment of skull of large animal.
Roughly worked flints, 4.

HOLE Z. 6. Excavated 26th September 1923.

Depth, 42 in. Top length, 72 in. Top width, 45 in. Bottom measurements, 39 in. by 17 in.

Similar in all respects to most of the others. The top of this hole had been disturbed when Stones nos. 6 and 7 were lately adjusted. Flinty rubble with some large flints reached to 26 in. B.G.L. This was succeeded by earthy soil with small broken flints reaching to 27 in. B.G.L. Following this came chalky rubble to the bottom.

Contents.

Quartzite pieces, 10.	Shale, 12.
Sarsen do., 4.	Flint hammer-stone, 1.
Rhyolite, 12.	Pottery, R.B., 12.
Dolerite, 10.	

HOLE Z. 7. Excavated 5th and 31st October 1923.

Depth, 43 in. Top length, 54 in. Top width, 35 in. Bottom measurements, 36 in. by 21 in.

This hole is in front of no. 7 and joins the incline to that hole (*vide* report on inclines on page 29, above). Depth of incline here 47 in. This hole was dug in section to show junction with incline. It was left open from the 5th until the 31st October for the surface to weather, which gives a better definition. Humus with flint descended to within one foot from the bottom, the layer above the bottom being earthy chalk rubble. Foreign-stone fragments were met with throughout the contents of the hole, and there were two pieces upon the bottom.

Contents.

	<i>To 14 in. B.G.L.</i>	<i>Below 14 in. to bottom.</i>
Quartzite . . .	3	1
Sarsen . . .	42	5
Rhyolite . . .	17	10
Dolerite . . .	14	13
Shale . . .	0	4
R.B. Pottery .	46	3
Rough flints .	1	
Iron objects .	2	

HOLE Z. 8.

This hole does not exist and was never made.

HOLE Z. 9. Excavated 24th October 1923.

Depth, 48 in. Top length, 80 in. Top width, 57 in. Bottom measurements, 40 in. by 21 in.

A deep hole in an important area. It was excavated in thin layers.

First Layer to 16 in. B.G.L.

In dark heavy humus with very little flint or chalk. It contained only chips and pottery. Quartzite, 2. Sarsen, 5. Rhyolite, 2. Dolerite, 1. Volcanic ash, 2. Pieces of B.A. Pottery, 5. Same of R.B. Pottery, 6.

Second Layer to 22 in. B.G.L.

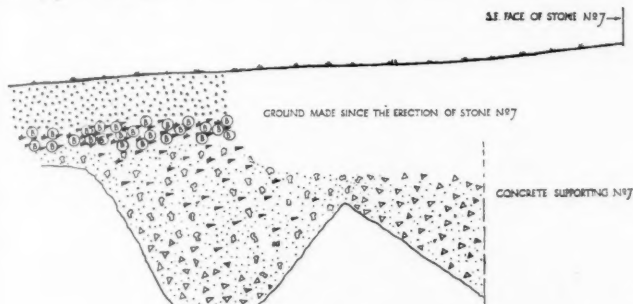
In similar conditions of soil. A small flat piece of Rhyolite. Quartzite, 2. Rhyolite, 5. Dolerite, 4.

Third Layer to 28 in. B.G.L.

In humus and powdery chalk at the sides. Humus still descending in the middle. Rhyolite, 4. Dolerite, 2. Shale, 1.

Fourth Layer to 34 in. B.G.L.

Humus became chalky generally. Quartzite, 3. Rhyolite, 8. Dolerite, 3. Shale, 2.

*Z 7 AND SLOPE TO N°7*

SHOWING Z 7 CUTTING THROUGH SLOPE TO THE BOTTOM OF THE HOLE FOR N°7 STONE THEREFORE THE Z 7 HOLE WAS MADE AFTER STONE N°7 WAS UPRIGHT

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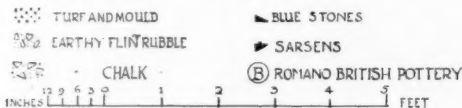


FIG. 4. Section of Hole Z. 7.

Fifth Layer to 41 in. B.G.L.

In earthy chalk. Rhyolite, 3. Dolerite, 3.

Sixth Layer to Bottom, 48 in. B.G.L.

In earthy chalk rubble, mostly chalk. An oval Rhyolite implement found at 44 in. B.G.L. A small fragment of bone. A small piece of Rhyolite near the bottom and one piece upon the bottom.

HOLE Z. 10. Excavated 29th October 1923.

Depth, 45 in. Top length, 80 in. Top width, 50 in. Bottom measurements, 49 in. by 24 in.

Same type of hole as the last.

First Layer to 19 in. B.G.L.

In humus with a few flints. It contained: Rhyolite chips, 10. Dolerite, 5. Shale, 3. Volcanic ash, 1. One Quartzite hammer-stone. B.A. Pottery, 4. R.B. Pottery, 8.

Second Layer to 26 in. B.G.L.

In humus with much broken flint. Quartzite, 3. Rhyolite, 4. Dolerite, 1. Shale, 4.

Third Layer to 35 in. B.G.L.

In humus with less flint than before. Rhyolite, 10. Dolerite, 6. Shale, 1. B.A. Pottery, 1 thick piece. R.B. Pottery, a small piece, which probably fell in from the upper layer.

Fourth Layer to 38 in. B.G.L.

In flinty humus becoming chalky at the sides. Rhyolite, 2. Dolerite, 2. A small piece of Dolerite worked to a smooth, curved surface.

Fifth Layer to 43 in. B.G.L.

In earthy chalk. One piece of Rhyolite.

Sixth Layer to Bottom, 45 in. B.G.L.

In earthy chalk. Two small pieces of Rhyolite.

N.B.—Sarsen did not occur in this excavation.

HOLE Z. 11. Excavated 29th October 1923.

Depth, 40 in. Top length, 72 in. Top width, 52 in. Bottom measurements, 49 in. by 23 in.

A large well-defined hole.

First Layer to 20 in. B.G.L.

In humus with many flints, also many Sarsen pieces from the destruction of the fallen stone of the circle. It contained: Rhyolite pieces, 9. Dolerite, 5. Shale, 3. Volcanic ash, 5. R.B. Pottery, 26. One rough flint.

Second Layer to 27 in. B.G.L.

In similar humus and flints. Rhyolite, 4. Dolerite, 5. Shale, 1. Volcanic ash, 2. R.B. Pottery, 1. A small bone fragment. One rough flint hammer-stone.

Third Layer to 33 in. B.G.L.

In humus with a little chalk, but less chalky in the middle. A small worked grey piece of Quartzite. Rhyolite, 2. Dolerite, 6.

Fourth Layer to 39 in. B.G.L.

In similar earthy chalk and narrow vein of humus in the middle. Rhyolite, 1 piece.

Fifth Layer to Bottom, 40 in. B.G.L.

In earthy chalk with a larger proportion of clean white chalk. Two pieces of Rhyolite and three pieces of Dolerite upon the bottom.

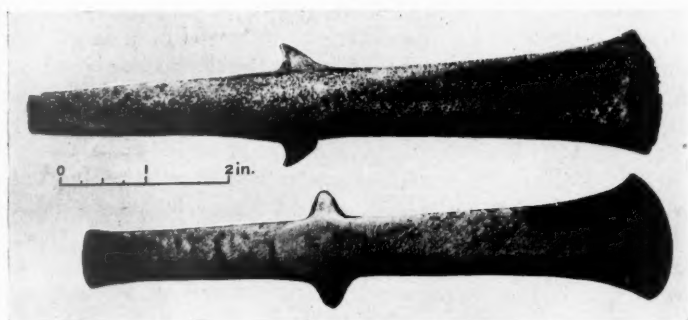
N.B.—There was no Sarsen in this excavation.

The Trunnion Celt in Britain

By W. J. HEMP, F.S.A.

THE two objects here illustrated are the first recorded examples from Wales of the bronze tool variously called the 'celt with trunnions', 'chisel with lugs at the sides', 'flat axe with lateral pegs', or 'lug adze'. Trunnion Celt is a convenient name to adopt, as it will cover most varieties of a class of tool which may have served more than one purpose.

The shorter specimen is now the property of Dr. Davies Rees of Caersws, and was ploughed up at Talerddig in Montgomeryshire, 20 miles from the coast, and on the watershed between



Trunnion celts from Wales ($\frac{1}{2}$).

the Severn and the Dyfi. The longer one belongs to Mr. W. C. B. Jones-Mortimer, who found it in his house, Bryn Eisteddfod, near Llandudno Junction; its previous history is not known, but there is little doubt that it came from that neighbourhood, and probably from the Conway valley.

The two specimens are of a similar type, but are differentiated by the shape of their 'trunnions' and also by the fact that the Talerddig one is sharpened at both ends, while the other has a blunt butt with an oblong section; and although it is possible that the butt in this case was originally sharper, it could never have had a broadened cutting-edge. A specimen in Rochester Museum, of the same size, has its butt slightly spread by hammering, which suggests employment as a chisel, but it would

have been difficult to put the double-ended variety to the same use, unless a grip was formed at the junction of the trunnions with the shaft, perhaps by winding round string to form a ball, or unless, as suggested by Mr. Reginald Smith, it was supplied with two (or more) block handles socketed to fit either end.

Sir Flinders Petrie deals with the question of use and hafting in *Tools and Weapons*, p. 17, plates xvii, xviii, and it is possible that a slight modification of one of the methods of mounting there illustrated might have been adopted. In any case, however, the purpose of the lugs must have been to prevent the tool from slipping when in use.

As already mentioned, no other examples are recorded from Wales; but one was found on the Border, at Broxton, 12 miles south of Chester. This is nearly 8 in. long, has both ends sharpened, and was found together with two looped palstaves and a spear-head. It was figured by Evans, *Ancient Bronze Implements*, p. 169, fig. 197.

Another, illustrated in *Archaeologia*, lxi, 138, fig. 97, formed with two others of slightly different type part of a large hoard found at Yattendon near Newbury, Berks. The hoard also contained socketed celts, hollow chisels, lance-heads, swords, and iron rust. The length of this specimen is $5\frac{1}{2}$ in., and both it and the Broxton one have a cutting-edge at either end.

A third, already referred to, is in the Rochester Museum, having been found at Harbledown near Canterbury. It is about $7\frac{1}{2}$ in. long and has only one cutting-edge.¹

A fourth, from Farley Heath, Albury (*V. C. H. Surrey*, i, 240), now in the British Museum, measures about $4\frac{3}{4}$ in. in length, and was found with a socketed celt, two palstaves, and a spear-head. Mr. Reginald Smith dates the hoard about 1000 B.C.

A fifth, $6\frac{1}{2}$ in. long, was found with three decorated flanged celts near Westbury on Trym in Gloucestershire.² It has two cutting-edges, but the lugs are at right angles to them instead of being in the same plane; while a small implement in the Archaeological Museum at Cambridge, illustrated by Dr. Cyril Fox,³ has the planes of its two cutting-edges at right angles. This was found in Cambridge, and perhaps belongs more definitely to the chisel than to the adze class of tool. All the above have trunnions of the Talerddig type.

Ireland has supplied the largest group from the British Isles; and a close parallel to the Talerddig implement from that country

¹ I owe this information to Mr. Reginald Smith.

² Illustrated in *Proc. Soc. Ant.*, xviii, 239.

³ *The Archaeology of the Cambridge Region*, p. 56 and pl. vii.

is now in the British Museum. This probably came from Co. Cork, and is just over $6\frac{3}{4}$ in. long. Another in the same collection is from Lusmagh, King's Co. It is about $4\frac{1}{2}$ in. long, and was found together with gouges, an anvil, a hammer, and a tanged chisel with lugs. A third, only 4 in. long, is from Co. Clare. A fourth, $4\frac{3}{4}$ in. long, with a cutting-edge at each end, from Randalstown, formed part of the collection of Mr. W. J. Knowles, of Ballymena, and was sold on 19th November 1924, to the National Museum, Dublin. Nine or ten others are to be found in the museum of the Royal Irish Academy; and one from Co. Antrim was formerly in the collection of Sir Lucas White King. This is a short tool with two broad cutting-edges, and, as in many of the continental specimens and several Irish ones, the 'trunnions' are only slightly developed.

The evidence of associated finds in the case of Britain clearly points to the latest period of the Bronze Age, and the distribution suggests that the tool reached these islands via Ireland. The question of general distribution of this type of bronze implement has been dealt with by M. Tallgren,¹ who records several instances of its occurrence in the Kama district west of the southern end of the Ural mountains, and notes that no example is on record from Siberia, and only one from other parts of Russia, namely that from Kertch on the shore of the Black Sea, illustrated in *Archaeologia*, lviii, 12. This is a short broad specimen and resembles in outline one in the Athens Museum,² of which the provenance is unknown, but is probably Greek. Another (miniature) Greek example from Dodona is illustrated in Ridgeway's *Early Age of Greece*, p. 443, fig. 79. M. Tallgren considers that the Kertch specimen—which is ornamented on both sides by a long-necked beast with horns—should be connected with the civilization illustrated by the Koban graves, which is pre-Hallstatt; while in the Hallstatt graves numerous examples of the type are found in iron.³ Similar iron axes also frequently occur in Russia. Although one of the Kama examples contained 99 per cent. of copper it was probably found in association with a socketed axe and a sickle.

Forms reminiscent of the Kertch type occur not infrequently in Asia Minor, and a mould found in Troy VII,⁴ although

¹ A. M. Tallgren, *Die kupfernen Flachäxte mit seitlichen Zapfen*.

² Not published: for this and other references I am indebted to Professor Bosanquet.

³ Ridgeway, *Early Age of Greece*, 419, fig. 71.

⁴ Dörpfeld, *Troja und Ilion*, i, 405, fig. 406; *Wiener Prähistorische Zeitschrift*, 1917, pp. 37, 40.

incomplete, would obviously have produced an implement closely resembling the Talerddig specimen. The trunnion type generally occurs also east of the Caspian, on the Russo-Persian borders, while it is well represented in the European countries bordering on the Mediterranean.

Montelius records examples from southern Italy, Sicily, and Spain, and one from a hoard at Monte Revello, near Rome, which also contained looped and socketed celts. A considerable number is reported from Spain: one of these was exhibited to this Society in 1919 and is figured in *Proc. Soc. Ant.*, xxxi, 159; while in the British Museum are specimens from both Italy and Spain. Central Europe seems to have produced only four bronze examples, all in Saxony; three from Leubingen Hill, and the fourth from Hedersleben, found with a stone axe-hammer and a chisel containing only 2 per cent. of bronze.

Montelius says that this type of tool is an oriental one. Tallgren suggests that its distribution is due to a seafaring Mediterranean people, and points out that the Phoenicians and those associated with them obtained metals both from Britain and the Urals.

Petrie emphasizes the likelihood that Crete was the source from which the 'lug-adze' spread west and east, the earliest forms being found there and in south Italy and Sicily (dating from the Copper Age in the last two districts); also in Sardinia, Spain, and Ireland on the west, and Egypt, Hungary, and Persia on the east, while the bronze form with definitely projecting lugs developed at a later date, but still probably originated in the Mediterranean, having been found in Greece, Italy, Sicily, and the British Isles; Syria, Austria, and the Crimea; and in iron in the northern districts, namely Hallstatt, Saxony, Bosnia, Silesia, Styria, Poland, and Hanover. He concludes that the type could hardly have begun later than 1600 B.C. in Crete, that it was still in a simple form in Egypt by 1000 B.C., but was transferred to iron by 800 B.C. in its fully developed form, and died out about 400 B.C.

Notes on some English Alabaster Carvings in Germany

By W. L. HILDBURGH, F.S.A.

THE following account of some unusual examples of English alabasters in German museums, together with short references to others in Germany, is intended to serve as a basis for a complete list of such carvings preserved in that country. The desirability of such a list is indicated by the importance, for the study of the history of the alabaster industry in England, of certain examples, seemingly of comparatively early dates, still (or until lately) in German churches, and by the number of products of that industry now in German museums. When Braun wrote, in 1910,¹ he believed that Germany was poor in English alabasters, because her native art of wood-sculpture was in full flower during the period when they were made, so that she had no need to import relief-carvings. Furthermore, he thought that probably most of the examples at that time in Germany had been brought there by dealers in antiquities. The list given below, although only preliminary in character, suggests that his opinions in these respects were not well founded. It records various pieces, carved, presumably, at the period when English alabasters were being made for export, which are still in the districts or situations for which they might well have been ordered.² There seems, therefore, no reason to think that any of the examples now in German museums are recent importations.

The list that follows is, except for the citation of some of the examples noted during a visit to certain of the principal German museums in 1922, largely the result of an unsystematized examination of a few of the very considerable number of German publications recording respectively the antiquities of specific districts. Were an examination of much of that literature to be undertaken systematically it would, I think, bring to light many

¹ J. Braun, 'Die englischen Alabasteraltäre', in *Zeits. für christliche Kunst*, xxiii, 238.

² Thus, the Adoration-tables in the churches at Bottenbroich, Paderborn, and Zuckau are all of early forms; and the altar-pieces at Danzig from a fairly early period of the alabaster industry.

more examples—and a goodly part of them hitherto unrecognized as English—whose very existence is at present unsuspected by students of medieval English art.

Fig. 1. Portion of a table, showing the Dedication of the Virgin Mary, in the Germanic Museum, Nuremberg.¹ Present size, 16½ in. by 11 in. Very little of the colouring remains. It is interesting to observe how closely the arrangement of the members of the group in the present example resembles that of the Madrid Museum's table, described and figured in *Proc. Soc. Ant.*, xxix, 75 *seqq.* A more complete table,² in the large reredos at La Celle (Eure),³ although its figures are fewer and differently posed (St. Joachim carries a crutch-staff instead of the basket of offerings; and St. Anne and the high priest are, contrary to tradition,⁴ shown steadying Mary during her ascent), indicates, by means of a pointed arch above the high priest, how the Temple was probably represented both in the present and the Madrid examples.

Fig. 2. Table, also in the Germanic Museum, nearly complete (present size 16½ in. by 10½ in.) and showing the Purification of the Blessed Virgin. None of the original colouring remains. This table, which seems to have formed part of the same set as the 'Dedication' of fig. 1, is the only example I know that shows the Purification of Mary as here depicted. The high priest stands within an arched opening representing the Temple, while towards him advances a group each of whose members holds in the right hand a candle. Mary, crowned, leads, followed by Joseph, the prophetess Anna,⁵ Simeon,⁶ and two women whom we may reasonably suppose to be virgins of the Temple.⁷ The scene departs in several respects from the

¹ This photograph, and the photographs of figs. 2 and 3, reproduced by courtesy of that institution. The originals of them, as well as a table of the Resurrection of our Lord, have been described in W. Josephi's *Die Werke plastischer Kunst* (part of *Kataloge* of the Germanic Museum), Nuremberg, 1910, pp. 5 *seqq.* The present table and that of the Purification are not reproduced there; the tables of the Notifying of the Shepherds and the Resurrection are.

² Cf. Biver, 'Some Examples of English Alabaster Tables in France', in *Archaeol. Journ.*, lxxvii, pl. xi, no. 1, and p. 75.

³ *Ibid.*, pl. viii.

⁴ Cf. 'Gospel of the Nativity of Mary', chap. vi, as given in B. H. Cowper's *The Apocryphal Gospels*, London, 1897.

⁵ Cf. Luke, ii, 36 *seqq.*

⁶ *Ibid.*, 25 *seqq.*

⁷ Cf. *The Digby Plays*, Early English Text Soc., Extra Ser. lxx, London, 1896, 'The Purification in the Temple (played on Candlemas Day, 1512)', 19 *seqq.*; the text refers to 'virgynes, as many as a man wyll', although the list of the players (cf. *ibid.*, p. xxxii) names only 'A virgin'.

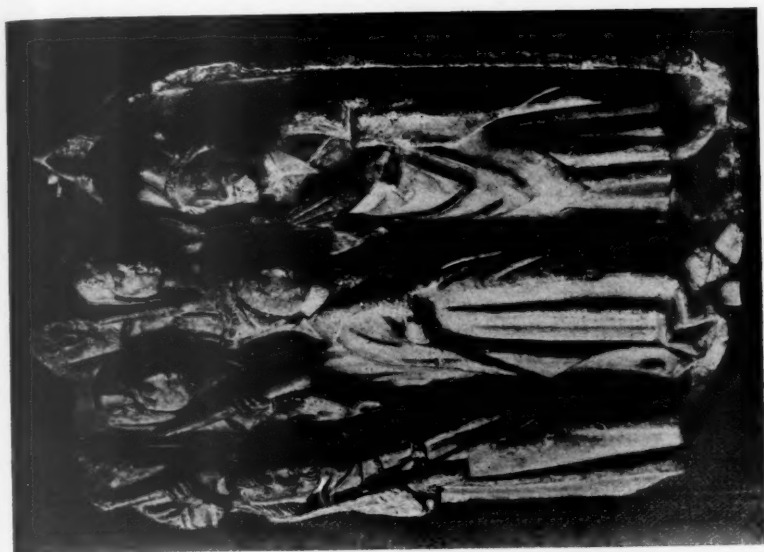


Fig. 2. Alabaster table of the Purification of the Virgin

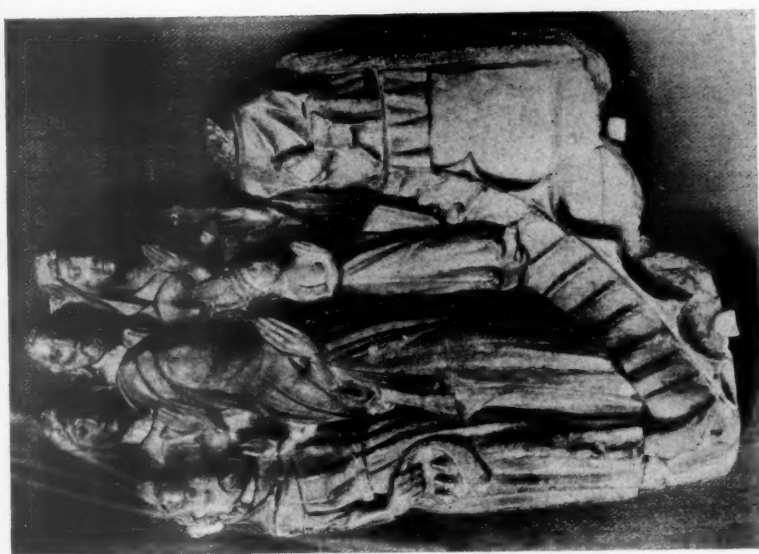


Fig. 1. Alabaster table of the Dedication of the Virgin



Fig. 4. Alabaster image of the Trinity



Fig. 3. Alabaster table of the Notifying of the Shepherds

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traditional rendering of the so-called 'Purification' usual in the fifteenth century. That rendering—appearing not only in pictorial art, and in some English alabasters, but also, under the title of 'The Purification', in English mystery-plays—shows Mary's presentation of the Holy Child in the Temple¹ at the end of the forty days allotted for a woman's purification after the birth of a male child, and in it are shown the pair of turtle-doves or young pigeons offered according to the Mosaic Law.² In the present table, however, neither the Child nor the birds appear.

There is no direct scriptural justification³ for the bearing of candles at a mother's appearance at the Temple at the end of the forty days. But as in pre-Reformation England women carried lighted tapers when being churched, 'in allusion to the Feast of the Purification of the Virgin (2nd February), the day chosen by the Roman Catholic church for the blessing of candles for the whole year',⁴ and as at Candlemas candles were carried in procession and held in the hand at Mass,—it would seem that the sculptor of the present table had an idea that Mary underwent a sort of churching in which one of the most striking features of Candlemas Day had a place. This seems the more likely because in medieval times 'the procession came to be regarded as representing the walk of St. Mary and Joseph to the Temple on the day of the Purification'.⁵ There is, in the large reredos at La Celle (referred to under fig. 1), a panel of the Presentation of the Infant Jesus—i. e. of the scene contemporaneously called 'The Purification'—in which Mary holds the Child towards the high priest and Joseph carries the basket with the two birds, while in the background two figures (the only ones present besides the principals) each hold a candle. Biver's comment⁶ on this, which is clearly an intermediate form between the proper rendering of the Presentation and such a 'Purification' as the present one, is that 'the artist naïvely mixes dates, modernizing the scene, as it were, by placing a candle in the hand of the two assistants, for is not the 2nd February Candlemas?' Another example of the same sort, with the birds and the candles, is in the

¹ Cf. Luke, ii, 22.

² Leviticus, xii, 8. For some earlier examples (ninth to eleventh centuries) of this in art, see Rohault de Fleury, *La Sainte Vierge*, i, Paris, 1878, pls. xxviii-xxxiii, and pp. 137 *seqq.* On the adaptation of the 'Presentation' scene as a 'Circumcision', in English alabaster, cf. *Proc. Soc. Ant.*, xxix, 83 *seq.*

³ Cf. Luke, ii, 22 *seqq.*

⁴ *Encycl. Brit.*, s.v. 'Churching of Women'. Cf. also W. C. Hazlitt, *Brand's Popular Antiquities*, 1870, i, 26.

⁵ Smith's *Dict. Christian Antiquities*, 1880, ii, 1141.

⁶ *Op. cit.*, 76.

reredos at San Benedetto a Settimo near Pisa.¹ The candles appear to be a regular feature of the fifteenth-century English rendering of the scene; some old glass at East Harling Church, Norfolk, has 'Simeon holding the baby, while Mary advances. St. Joseph follows with a candle and basket of doves; and behind are two other men also bearing candles';² and an English glass panel now in the Leicester Museum similarly shows candles.

An examination of pictures of the Presentation of Jesus (= Purification of Mary) of the fifteenth and sixteenth centuries seems to indicate that it was not a general European custom at that period for the persons accompanying a woman attending church after childbirth to carry candles. In the numerous continental examples given by S. Reinach,³ some of the participants (but not Mary) in a few instances carry lights. I think that in only one of his examples—a picture painted by Jacques Daret in 1434⁴—do almost all of those present hold lights. Venturi, who has dealt⁵ with Italian representations of the Purification, shows only one picture, out of the many he reproduces, in which lights are carried. Concerning the subject, at the end of the fifteenth and in the sixteenth century, he says, 'At times . . . St. Joseph and others hold tapers in their hands, in testimony of the ancient use of candles for the ceremonies of the festival—"Candlemas". The Gospel incident was turned to a Catholic ceremony.'⁶

It seems not at all unlikely that the depicting of the candles in the present case comes directly from some mystery-play which the carver (or, at least, the originator of the conventional representation here followed) had seen on an English stage. In 'The Purification', of the Coventry Mysteries, we find Joseph saying, 'Take here these candelys thre | Mary. Symeon. And Anne | And I xal take the fowrte to me | to offre oure childe up thanne'.⁷ In the scene, as represented at Coventry, appeared both the Child and the turtle-doves, absent from the alabaster; and, in addition to the persons above named, only the high priest ('Capellanus'). In another play, evidently Joseph (even if no

¹ Cf. R. Papini, 'Politici d'Alabastro', in *L'Arte*, xiii, 205; on 204 this table is wrongly termed a 'Circumcision'.

² F. Kendon, *Mural Paintings in English Churches*, London, 1923, 59.

³ *Répertoire de Peintures*.

⁴ Cf. *ibid.*, vol. iv, p. 123.

⁵ In *The Madonna* (trans. from Italian), London, 1902, chap. on 'The Purification'.

⁶ *Ibid.*, 303 seq.

⁷ *Ludus Coventriae*, E. E. T. Soc., Extra Ser., no. cxx, 1922, 167; *Coventry Mysteries*, Shakespeare Soc., 1841, 177.

one else) had to do with a candle, for he says, 'A signe I offer here also, Of virgine wax . . . As cleane as this waxe nowe is, As cleane is my wife. . .'.¹ In a third play, Anna tells 'Ye pure Virgynes' to come forth with 'tapers of wex' and worship the Child, and the virgins 'holde tapers in ther handes', giving Simeon his opportunity of comparing the lighted taper with Christ.² In conclusion, we may quote, as possibly indicating that in England men *sometimes* carried candles at ordinary churchings, the observation of a sixteenth-century writer to the effect that 'It is seldome sene that men offer Candels at womens Churchinges, savinge at our Ladies'.³

Fig. 3. Table, in the Germanic Museum, of the Notifying of the Shepherds. Size, 17½ in. by 10½ in. Most of the original colouring remains. Obtained, in 1875, from an Augsburg antiquity-dealer. It is the only example of its subject, in English alabaster, of which I have found record. From the hands of the announcing angel a scroll passes to the left hand of an old, bareheaded, seated shepherd, behind whom are two younger shepherds, one piping. Scattered sheep are grazing in front of the shepherds. We may note that the peculiar polyhedral foliage at the top of the panel connects this example with the workshop (or group of workshops) which produced so many panels which have come down to us.⁴

The Germanic Museum has, besides the three tables here figured, a table of the Resurrection of our Lord, of the usual type, obtained at Leipzig in 1888.⁵

Fig. 4. Large image of the Holy Trinity.⁶ Statues of this kind, representing either the complete Trinity or a group of the First and Second Persons, are fairly common,⁷ but almost always

¹ *The Chester Plays*, Shakespeare Soc., i (1843), 194.

² *The Digby Plays*, 19 seq.

³ Hazlitt, *op. cit.*, i, 27, foot-note, quoting from 'The Burnynge of St. Pauls Church in London, 1561'.

⁴ Cf. *Ant. Journ.*, i, 231; *Cat. Alab. Exhib.*, 42 seq.; Prior and Gardner, *Med. Fig. Sculpture in England*, 491.

⁵ Cf. Josephi, *op. cit.*, p. 6 (with picture). On the type, cf. *Ant. Journ.*, iii, 34 seqq. and pl. vii.

⁶ I was (and perhaps still is) at Munich. I was told that it was in the National Museum there, but I have not been able to verify the statement. Never having seen the original, I do not know if it has been subject to 'restorations' which might have brought about its peculiarities; from an excellent photograph, I judge that it probably has not.

⁷ Cf. Nelson, *Archaeol. Journ.*, lxxi, 162 seqq. and pls. iii, iv; Hildburgh, *Proc. Soc. Ant.*, xxxii, 126 seq. For panels of the subject, cf. *Proc. Soc. Ant.*, xxviii, 63 seqq., and *Ant. Journ.*, iii, 28 and pl. vii.

in them the Father's hands are uplifted—either in benediction or as supports for a napkin containing souls—instead of being, as here, one raised in benediction and the other lowered so as to touch the Crucified Son. The treatment of the Father's head seems to connect closely this image with some examples which have been published, but the disposition of His outer garment (which still bears painted ornamentation) is unusual.

At Munich, in the Bavarian National Museum, there are three alabaster tables of usual types. They have been illustrated on pl. x, and described on p. 23, of H. Graf's *Gothische Alterthümer der Baukunst und Bildnerei*:¹ no. 410, God the Father holding the Crucified Son; no. 411, the Entombment of Christ; and no. 412, the Resurrection of Christ.

At Berlin, in the Kaiser-Friedrich Museum, are two tables.² One is of the Resurrection, and of a usual type; obtained by gift in 1861. The other, about 9½ in. by 5¼ in., is a St. John's Head, flanked by St. Peter and the archbishop, and with the Lamb of God; it is unusual (unique, so far as I know) in that the Lamb stands, with raised forefeet against St. Peter, instead of being couchant as in most other similar tables.³ Obtained at Venice in 1887.

At Cologne the Archiepiscopal Museum has two tables; an Adoration of the Kings⁴ and a Crucifixion (about 20 in. high) from the centre of a set. In the Schnütgen Collection there are two tables—an Adoration of the Kings⁵ and a Betrayal⁶—and an image⁷ of the enthroned Virgin and Child; in this image, which is in high relief with a flat back, and about 18½ in. tall, both Mary and the Child are crowned, and the former holds a sceptre.⁸ In the Kunstgewerbe Museum is a table, combining

¹ Vol. vi of the *Kataloge des Bayerischen Nationalmuseums*, Munich, 1896.

² Cf. Vöge's *Königliche Museen zu Berlin: Die deutschen Bildwerke und die der anderen cisalpinen Länder*, Berlin, 1910, p. 43, nos. 94, 95 (with photos).

³ Cf. W. H. St. John Hope, 'On the Sculptured Alabaster Tablets called Saint John's Heads', in *Archæologia*, lii, 682, 683, 685, 686, 689, 691, 695, pl. xxii; Nelson, *Archæol. Journ.*, lxxiv (1917), 110 and pl. v.

⁴ Cf. H. Kehr, *Die heiligen drei Könige in Literatur und Kunst*, Leipzig, 1909, ii, fig. 259.

⁵ Cf. A. Schnütgen in *Zeits. für christliche Kunst*, xxii (1909), pl. ix and cols. 257 seq.; F. Witte, *Die Skulpturen der Sammlung Schnütgen in Köln*, Berlin, 1912, pl. 56 and p. 78; and *Proc. Soc. Ant.*, xxix, 86, foot-note.

⁶ Cf. Schnütgen, pl. and *loc. cit.*; Witte, *loc. cit.*; and *Proc. Soc. Ant.*, xxxii, 120.

⁷ Cf. Witte, *op. cit.*, pl. 30 and p. 67.

⁸ Pl. 74 of the Schnütgen catalogue above cited shows an alabaster image of St. Christopher, about 19½ in. high, tentatively ascribed to England of the middle of the fifteenth century. To judge from the picture, I am inclined to think that the work is not English; and that judgement seems to be confirmed by the differences

the Annunciation with God the Father upholding the Crucified Son, in what is presumably its original painted wooden housing, a remarkable piece,² of comparatively early date.

At Aix-la-Chapelle, in the Suermondt Museum, are a table of the Coronation of the Virgin and an image-panel of St. John the Baptist, both² of ordinary types and about 16½ in. high; two images in relief of the Virgin and Child,³ one about 8¼ in. and the other about 9 in. high; and a similar figure of St. Anne with the Virgin and Child.⁴ All were formerly in the Moest Collection at Cologne, and all seem to have been made in the fifteenth century. There is also a fragment of an alabaster relief of the Death of the Blessed Virgin,⁵ attributed to the Nottingham School of the middle of the fifteenth century, but so worn that it is difficult to judge from a photograph alone; from the photograph reproduced by Schweitzer, I am inclined to doubt an English origin.

At Gross-Grönau, in the Church of St. Willehad, there are five tables and four architectural fragments (canopies or parts of canopies),⁶ the remains of an altarpiece, of a usual type,⁷ in honour of the Virgin. There are Mary (from an Annunciation), the Adoration of the Kings, God the Father (holding a napkin with souls) with the Crucified Son and with angels about Him, the Assumption, and the Coronation by the Three Persons in human form.

In the Catholic parish church of Bottenbroich, in the Rhine Province, there is an Adoration of the Kings,⁸ of an early type.

At Emmerich, in the same Province, is a curious panel,⁹ about of the image, in a number of respects, from a type which appears to have been a standard one for the English alabastermen of the fifteenth century (cf. *Ant. Journ.*, i, 228 *seqq.* and pl. ix).

¹ Briefly noted by Nelson, in 'Earliest Type of English Alabaster Panel Carvings', in *Archaeol. Journ.*, lxxvi, 93 *seqq.*; a detailed study is to appear in *Archaeologia*, lxxiv.

² Figured by H. Schweitzer, *Die Skulpturensammlung in Städtischen Suermondt-Museum zu Aachen*, ii, Aix-la-Chapelle, 1910, pl. 57.

³ Cf. *ibid.*, pl. 58.

⁴ *Ibid.*, pl. 58.

⁵ *Ibid.*, pl. 58.

⁶ Cf. R. Haupt and F. Weysser, *Die Bau- und Kunstdenkmäler . . . Lauenburg, Ratzeburg*, 1890, 64 *seqq.*; on p. 65 are given line-drawings of the four complete tables.

⁷ Cf. *Cat. cit.*, p. 35; E. MacLagan, 'An English Alabaster Altarpiece in the Victoria and Albert Museum', in *Burlington Mag.*, xxxvi (1920), 53.

⁸ Cf. P. Clemen, *Die Kunstdenkmäler der Rheinprovinz* (vol. iv), *Kreis Bergheim*, Düsseldorf, 1899, pl. facing p. 48, and pp. 49 *seq.*; Kehr, *op. cit.*, 217 *seqq.*; *Ant. Journ.*, iii, 30 *seq.*; Nelson, 'Earliest Type . . .', 89.

⁹ Cf. Clemen, *op. cit.* (vol. ii), *Kreis Rees*, 46.

18 in. by 10 in. In its upper part are God the Father, the Crucified Son, and two standing censing angels; in the lower, a person in bed, with a tonsured man in monkish dress standing at the foot of the bed, holding a book and with a scroll proceeding from his right hand raised in benediction. The base of the Son's cross appears directly above, and as if in contact with, the recumbent person. The panel looks as if it might be a representation of the Holy Trinity, such as was often used for the centre of a set of tables, adapted as a representation of a death-scene.

At Paderborn, in Westphalia, there is in the cathedral an Adoration of the Kings,¹ of the same general type as the one at Bottenbroich, but probably a little later in date.

At Zuckau, near Danzig, is another table of the Adoration,² of a similar type to the one at Paderborn.

At Danzig itself, in the Marienkirche, there is a complete triptych having five tables of the Joys of the Blessed Virgin, and images of SS. John Baptist and John Evangelist,³ and a further five tables with scenes from the story of St. John Baptist.⁴

The fine complete altarpiece now in the Victoria and Albert Museum should at least be mentioned in an account of English alabasters in Germany, because it was bought at Munich in the thirties of the last century,⁵ and perhaps came from a German source, but Munich was even before that time a centre to which art-objects from other places were brought.

¹ Cf. A. Ludorff, *Die Bau- und Kunstdenkmäler des Kreises Paderborn*, Münster i. W., 1899, pl. xlv and p. 98; *Ant. Journ.*, iii, 30 *seqq.*; Nelson, 'Earliest Type . . .', 89 *seq.*

² Cf. Kehrer, *op. cit.*, fig. 258; *Ant. Journ.*, iii, 32; Nelson, 'Earliest Type . . .', 90. It is perhaps worth noting that Nelson figures (*op. cit.*, pls. iv and v) two more examples in England—one at Reading, the other in Cornwall—of the elongated type of 'Adoration' of which I was able to cite (*Ant. Journ.*, iii) only two examples in England as against three in Germany.

³ Cf. Braun, *op. cit.*, cols. 238 *seq.*; MacLagan, *op. cit.*, 61; Nelson, 'English Alabasters of the Embattled Type', in *Archaeol. Journ.*, lxxv (1918), 314 *seq.*, and 'The Virgin Triptych at Danzig', in *ibid.*, lxxvi, 139 *seqq.* and pls. i-iii.

⁴ Cf. Nelson, ' . . . Embattled Type', 328 *seqq.* and pls. xviii-xxii; MacLagan, *op. cit.*, 61 and pl. ii.

⁵ Cf. MacLagan, *op. cit.*, 55.

Pre-Roman Finds at Folkestone

By S. E. WINBOLT, M.A.

It was probably before the Claudian invasion of A. D. 43 that the following objects found at Folkestone were either produced in or imported into Britain.

In 1918 (February and December) Mr. C. H. Stevens found in an allotment, a little west-south-west of Radnor Park, three



FIG. 1. Urns from Folkestone Allotments.

burial urns, a flagon, and a Samian cup (fig. 1). The first found (25th February)—A on photograph—contained human bones and earth, and was much broken, but was skilfully restored by the finder. It is a barrel-shaped beaker of Belgic type, $8\frac{1}{4}$ in. high and 7 in. across the bulge, and is of fairly hard clay, coated with bitumen. The rim is oblique, and the neck conical, separated from the body by a bold cordon. Under the cordon are three incised horizontal lines, under which are vertical incised lines in pairs, making a broad band; under these again more horizontal lines. The lower part contracts in a curve down to a plain base with no moulded foot. A close analogy is May's *Silchester Pottery*, p. 167, pl. LXX, 154. Cf. also Evans, *Archaeologia*, vol. lii, Aylesford, pl. ix, 1; and *Proc. Soc. Ant.*, xxi, p. 220, fig. 3. The

probable date of this beaker is between 30 B.C. and A.D. 40. Its manufacture may reasonably be assigned to Gallia Belgica.

The largest urn (found in December, some 40 ft. distant from A) does not appear in the photograph, and is lettered c. It was very fragmentary when found, and as restored measures 10 in. high. Though of different clay, of a biscuit colour, it is of the same shape and type as A. It contained a large bronze brooch (with coiled spring) nearly complete. This urn also may be dated 30 B.C.—A.D. 40.

The third urn (B) was also found in February 1918, containing the bones of a very young person, and two bronze brooches incomplete, one of which was plain, the other knotted with a row of small bosses. The paste is fine in texture, and is coated on the outside with bitumen. Its height is $5\frac{7}{8}$ in. and width $5\frac{1}{2}$ in. It is a Belgic pedestal urn of the Late Celtic or La Tène III period, with cordons at the base of the neck. Analogies are to be found in Evans, *Archaeologia*, vol. lii, pl. vii, 5; Brit. Mus. *Early Iron Age Guide*, p. 121; and a funeral group in Colchester Museum, described by Dr. H. Laver (*Proc. Soc. Ant.*, xx, 213). Déchelette dates similar urns for Britain between 100 B.C. and A.D. 50. The form is strikingly similar to Etruscan metal urns in the Florence Museo Archeologico.

The fourth pot (D) was found intact along with B, and resting in E, a Samian cup. D is $5\frac{3}{4}$ in. by $4\frac{3}{4}$ in., and E $3\frac{3}{8}$ in. by $1\frac{5}{8}$ in. This group was found 4 ft. north-west of A. D is a one-handled flagon, of tile-red unglazed clay, with a neck ring and widening handle and neck. Mr. May suggests that it may be a first-century Belgic imitation of a Roman flagon, and compares flagons from the Haslemere grave-field, published in *Proc. Soc. Ant.*, xxi, 217, fig. 3.

The Samian cup (E) is of form 27 Drag. and of first-century type, but unstamped and therefore not to be definitely dated; but both D and E may possibly be dated prior to A.D. 50.

The one nearly complete brooch which was found in the biggest biscuit-coloured urn (c) is of bronze, with a ring and coiled spring at one end, and a catch at the other. Its greatest length is 3 in. and width (in the middle) $1\frac{1}{8}$ in. The other two, found in the pedestal urn (B), are incomplete; one plain, with coil spring, the other knotted with bosses as described above.

All these pots and brooches may safely be classed as pre-Claudian, and the probability is that they were imported into Britain.

In April 1924, on the new Roman site in East Wear Bay, four urns were found between two corridor walls of Roman construc-

tion, but in the gault clay below the level of the wall-footings. They had evidently escaped the notice of the Roman masons. One was broken into so many fragments that restoration was impossible; but all four were of very poor material, thin and brittle, and of a brown sandy texture. The three which were got out whole, filled with earth and burnt bone fragments, soon began to crumble; but they have been restored at the Folkestone Museum (fig. 2). They were most probably of local British manufacture.

(1) The tallest of the three is 10 in. high, with greatest girth 32 in. Diameter of mouth, including rim, 5 in.; diameter of base $4\frac{1}{4}$ in. It is dull black fumed all over.

(2) The second is $8\frac{1}{2}$ in. high, greatest girth $34\frac{1}{4}$ in.; diameter of mouth, including rim, $9\frac{3}{4}$ in.; of base, $4\frac{5}{8}$ in. This is dull black



FIG. 2. Urns from Roman Villa, East Wear Bay.

generally, but burnished black for a depth of 2 in. round the neck, and for 2 in. round the base.

(3) The third, brownish black all over, is $4\frac{1}{2}$ in. high, with greatest girth $20\frac{3}{4}$ in.; diameter of mouth, including rim, $6\frac{3}{8}$ in., and of base, $3\frac{3}{4}$ in. Three other British burial urns were found in August 1924, badly broken, and not yet restored, one of which had a foot ring. Among the contents of one were a human tooth, a small piece of greenish glass shaped as for insertion in a ring, and a minute grey flint implement with seven facets.

A silver brooch (fig. 3, *a*), not quite complete, was found in no. 2. Its length, including ring, $2\frac{3}{4}$ in.; width, 1 in. It has a moulding on the bow near the head, and a four-coil spring with the chord inside.

A bronze brooch (fig. 3, *b*) found in no. 1 was also $2\frac{3}{4}$ in. by 1 in. It is not complete, but has a coil spring with chord outside and an open triangular catch.

Near the broken pot were found a silver armlet (fig. 3, *c*) and a bronze ring (fig. 3, *d*) of $2\frac{1}{2}$ coils. The armlet is roughly heart-shaped with a break on the flat side, the ends thickening to the break. Its greatest width is $2\frac{3}{4}$ in. This shape is unusual, but an exactly similar bracelet is illustrated in S. Reinach's *Catalogue Illustré* of St. Germain Museum, vol. ii (1921), p. 303, from the necropolis of Lavoye, Meuse.

For the identification of five coins I am indebted to Mr. H. Mattingly, of the British Museum.

(i) Found on the slope beneath the Wear Bay site, in 1865, and now in the possession of Miss Jeffery, Folkestone, but not yet published. A gold coin, diameter $\frac{3}{4}$ in. On one side a horse with dot under barrel representing a helmet (fig. 4); the other side

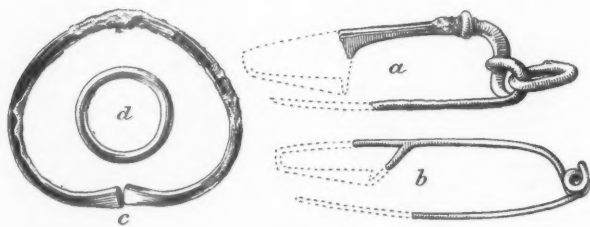


FIG. 3. Fibulae, armlet, and ring, from East Wear Bay ($\frac{1}{2}$).

smooth and convex. A Gaulish or British coin; see Evans, *Brit. Coins*, and *Num. Chron.*, 1919, pl. viii, 18.

Nos. ii and iii were found on the floor of a hypocaust at the cliff edge.

(ii) *Obv.* a tin coin with *Abc*; *rev.* 'galeated head'. See Evans, *Brit. Coins*, pl. n. Usually found in south-east England, e.g. Braughing in Herts., and Kent. See also *Archaeologia*, lxi, 18.

(iii) Small bronze; early British. *Obv.* \ddagger ; *rev.* a horse. See Evans, *Brit. Coins*, pl. n, 13.

(iv) A small tin coin, Early British, and rather uncommon. It was perhaps minted by the Iceni, but kindred types are found in south England. *Obv.* two boars back to back; *rev.* horse, very similar to some Gallic coins. See Evans, b. 11.

(v) Small tin, British. *Obv.* head left, not helmeted. *Rev.* grotesque quadruped (fig. 5). Cf. a coin in Layton Collection at Brentford Public Library, described by Mr. Reginald A. Smith, in *Archaeologia*, lxi, 18. Perhaps both sides are derived from a type of Massilia.

Three similar specimens were found at Mt. Caburn, near Lewes, Sussex, a site probably not occupied after 43 A. D.

These coins may have been minted in Britain or in Gaul for a prince ruling on both sides of the straits, e.g. over the Morini and the Cantii.

These five urns, one flagon, five brooches, one armlet, one ring, and five coins are together interesting evidence of the fact



FIG. 4. British gold coin ($\frac{1}{2}$).



FIG. 5. British tin coin ($\frac{1}{2}$).

(which might be deduced from geographical considerations) that the British, of the south-east districts at least, were for a period dating roughly from 50 B. C. to A. D. 50 much under Roman and other continental influences, and that they freely used imported bronze articles and pottery and coins suggested by Italian and Greek patterns. So far as is known, this article embodies the first evidence derived from Folkestone of these well-established facts.

Prehistoric Gold in Wilts.

By Mrs. M. E. CUNNINGTON.

IT has been suggested that the comparatively numerous finds of gold in Wiltshire barrows are due to their having been, more or less, on the direct route of the traffic in Irish gold and other objects. On Mere Down, north of Gillingham, a skeleton was found in a grave under a small barrow. With it was a beaker of type B, also a flat, tanged copper dagger, a piece of worked bone, and two gold discs of a well-known Irish type. The surviving disc is very thin, and has embossed upon it an irregular cruciform



FIG. 1. Gold disc
from Mere Down ($\frac{1}{4}$).

ornament enclosed within a circle, and a row of very small punch-marks round the edge (fig. 1).

Numerous examples have been found in Ireland, ornamented with concentric circles, or with a cruciform ornament, in some cases closely resembling those from Mere.¹ It is only of recent years, in the light of discoveries made in Scandinavia, that these discs have been recognized as solar symbols. The cruciform figure is derived from a four-spoked wheel; a wheel, and thence a cross within a circle, being well-known solar symbols.² As at Mere, the discs are usually found in pairs, and have two small perforations near the centre. The late Mr. E. C. R. Armstrong pointed out that, as these discs are so often found in pairs, it is probable that they were only the outer covering of a central disc, or core, of bronze; but, as no bronze seems to have been found at Mere, perhaps this core was sometimes made of a more perishable material.

¹ See Coffey, *The Bronze Age in Ireland*, and *Catalogue of Irish Gold Ornaments*, by E. C. R. Armstrong, F.S.A., 1920.

² See Armstrong and Coffey, as above; Déchelette, *Manuel*, ii, pp. 415, 458.

The disc found with a votive chariot at Trundholm in Zealand, which first suggested to Mr. Reginald A. Smith their probable use and origin, was dated *circa* 1300 B.C.¹ It has been suggested that the Irish discs may be about the same date.² If, however, as seems inevitable, the Wiltshire discs are derived from Ireland, or are due to Irish influence, and are found in a grave of the first period of the Bronze Age, the Irish, and consequently the Scandinavian, examples must be at least as early as the first period of the Bronze Age in Britain. The suggested date, therefore, of

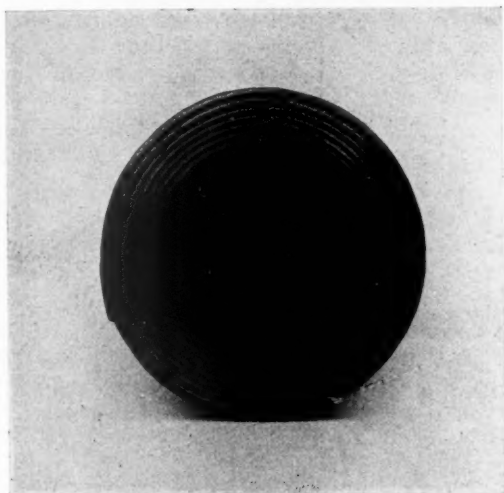


FIG. 2. Gold disc from Manton.

circa 1300 B.C. for the Scandinavian and Irish examples seems somewhat too late.

Discs of another type that have been found in several Wiltshire barrows are possibly related to the gold discs described above. But the scope of the present note is only to call attention to the remarkable similarity between them and one found by Sir Arthur Evans in the 'Tomb of the Double Axes' at Knossos in Crete.³ Fig. 2 represents a disc found in a barrow at Manton, near Marlborough, with the richly furnished burial of an aged woman.⁴ It is of red amber framed in a casing of thin gold. The gold is

¹ *Proc. Soc. Ant.*, xx, 6; Déchelette, *op. cit.*, p. 416.

² Armstrong, *op. cit.*, p. 37.

³ *Archaeologia*, vol. lxxv, p. 42, fig. 56.

⁴ *Wilt. Arch. Mag.*, vol. 35, p. 8, fig. 5.

ornamented with six concentric lines, very finely and regularly drawn, and on the lines, at regular intervals, are a number of minute punch-marks. The disc is the same on both sides, the gold being in two separate pieces, skilfully joined round the rim.

The gold and amber disc found at Knossos is of the same size, and is almost identical with the one from Manton, except that the gold bordering appears to be plain. Two amber beads, found near the disc at Knossos, were analysed, and found to be amber of the 'Baltic class'. In a subsequent note, however, Sir Arthur Evans states that it is now known that amber of the same composition as that of the Baltic occurs in the valley of the Dnieper.¹ There is, nevertheless, little doubt that amber from the Baltic region found its way down to the Aegean in the Bronze Age.

The date assigned by Sir Arthur Evans to the 'Tomb of the Double Axes' is *circa* 1500-1450 B.C., i.e. Late Minoan II, or Palace Period; a date quite compatible with that of the Wiltshire barrows in which similar discs have been found.² The British discs have been called earrings, partly because they are sometimes, but not invariably, found in pairs, and also because they are provided on the rim with two converging holes, which might have held a slender thread for suspension.

Were these ornaments brought to Scandinavia and north-western Europe along the amber route in exchange for the raw material, or did they come from the Mediterranean by way of Spain, and along the old Atlantic coast-route? It is perhaps not without significance that in the same tomb as the disc at Knossos there was a notched bead of blue vitreous paste, similar to beads that have been found in Wiltshire, and British barrows elsewhere. Déchelette thought that the beads came by way of the Atlantic route, as they are also found in Spain.³

¹ *Op. cit.*, p. 44-5.

² References to these discoveries will be found in the *Wilt. Arch. Mag.*, vol. 35, p. 15.

³ *Manuel*, ii, p. 371.

Notes

Two famous Archaeologists.—John, Lord Abercromby, 5th Baron of Aboukir and Tullibody, died in Edinburgh on the 7th October last, in the 84th year of his age. He was a great-grandson of Sir Ralph Abercromby and, on the death of a brother in 1917, succeeded to the title, conferred originally on the widow of Sir Ralph. He relinquished a commission in the Rifle Brigade and devoted himself to the study of Philology, Archaeology, and Folk-lore, retaining an interest in the Mediterranean and Near East, especially in early Arabian antiquities. He had travelled widely, and was a master of many European languages, including Finnish, the result of his acquaintance with that tongue being the publication in 1898 of a work entitled *The Pre- and Proto-Historic Finns*. He associated himself closely during the latter part of his life with the Society of Antiquaries of Scotland, subscribing generously to their Excavation Fund, serving on their Council in various capacities, and being, for a time, their President. In the study of the comparative chronology of Bronze Age Ceramics he particularly interested himself and, after several years of active research during which he visited most of the museums in this country and on the Continent, he produced in the year 1912 his well-known work *A Study of Bronze Age Pottery in Great Britain and Ireland*, in two volumes. As an archaeologist, Lord Abercromby was thoroughly imbued with the scientific spirit, and at an early date realized, perhaps better than some of his contemporaries, the value of acute observation and record in the conduct of excavations.

Another loss to prehistoric study is M. Jacques de Morgan, who died at Marseilles on 12th June, at the age of 67. By profession originally an engineer, he was a great traveller, chiefly in the interests of Geology; but did his best work as an archaeologist in Egypt, the Caucasus, and Susiana, where his chief discoveries were the stele engraved with the laws of Hammurabi, the famous stele of Naramsin, and the early ceramics of Susa. As Director of Antiquities in Egypt he made full use of his opportunities, and specialized in the pre-Dynastic and Palaeolithic periods. He was the first correctly to diagnose the pre-dynastic antiquities of Egypt, and to assign them to the later Stone Age. Though not all his views have stood the test of time, his discovery that Egypt, like other countries, had her Neolithic and Chalcolithic periods, coupled with Sir Flinders Petrie's finds of pre-dynastic antiquities at Ballas and Naqada, gave a new orientation to Egyptian archaeology. His knowledge was encyclopaedic, and not the least of his accomplishments must be reckoned his knowledge of many languages, European and Oriental, and his wonderful draughtsmanship, which has given us the best illustrations of stone implements in existence. His countrymen have expressed their appreciation in *Revue Anthropologique*, July-Aug. 1924; *L'Anthropologie*, xxxiv, 467; and *Arêthuse*, Oct. 1924 (with bibliography).

Palaeolith from raised beach in Sussex.—In 1912 part of an old gravel pit in Slindon Park, Sussex, was reopened in connexion with the rebuilding of Slindon House. It is situated in Slindon Bottom in the north-west corner of the park just south of the road connecting Slindon with Eartham. The pit is a large one, and the irregularity of its outline is due to its having been worked in bays. The worked surface is some 250 ft. long, and from 11 to 24 ft. in height. Towards the southern part the old worked surface shows 3 ft. of gravel overlying 8 ft. of sand; a little further north 6 ft. of gravel with large unbroken unrolled flints appear above the talus, while in the northern bays some 14 ft. of well-rounded beach pebbles are interposed between



FIG. 1.

FIG. 2.

Implements from Slindon, Sussex ($\frac{1}{3}$).

gravel above and a layer of 6 in. of fine sand below. The sand rests on chalk.

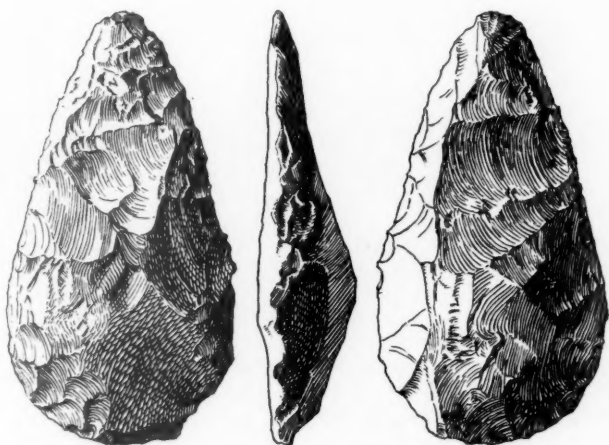
This raised beach is 120 ft. above Ordnance Datum, and keys in with that at Goodwood, and with the beach exposed in Danes Wood, Slindon Common, two miles to the east.

Amongst the worked flints brought out of the raised beach was a water-worn implement (fig. 1) $4\frac{1}{2}$ in. by $3\frac{1}{4}$ in., and $1\frac{3}{4}$ in. thick. It must rank as a hand-axe, though the point is blunt, either unfinished or not required: otherwise there is a zigzag cutting-edge all round, and the whole surface has a creamy patina, except for bluish patches on the flatter face. St. Acheul I is a likely date for this, and the gravel can hardly be earlier.

Another implement of 'tea-cosy' type (fig. 2) was picked up on the floor of the pit, but it is not clear from what part of the working-face it was derived. It has a width of $4\frac{1}{2}$ in., and height of $3\frac{3}{4}$ in., with a flat base enabling it to stand upright. As is often the case, the middle of one edge of the base is battered to form a false hinge-fracture which was perhaps useful in handling these segmental tools (see *Grime's Graves Report*, p. 192, fig. 69). This implement is grey, quite unworn, and probably belongs to an horizon above the gravel.

The hand-axe has been generously presented to the British Museum by our Fellow Dr. Eliot Curwen, who supplied the material for this note.

Palaeolith from Plateau gravel.—A well-made hand-axe, mottled grey and very lustrous, is stated by Mr. Keith Talbot of Reading to have been found half-way up the gravel face of a pit about 260 ft. O.D. at Tokers Green, Oxon., about $1\frac{1}{2}$ miles north-west of Caversham Bridge; and it is here illustrated by his permission. The deposit is about 140 ft. above the river, which is here 120 ft. O.D., and must be classed with the plateau spread rather than with the terrace-gravels that exist between this pit and the river. The implement is devoid of crust, has a cutting-edge all round, and one face chipped nearly flat,

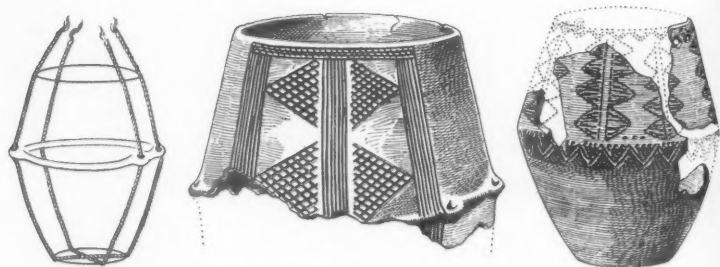


Palaeolith from Plateau gravel, Tokers Green ($\frac{2}{3}$).

one side being rather zigzag and the other straight. The edges are sharp in contrast to all other implements from the pit, which are rolled and more or less ochreous in colour. References to geological papers on the Reading gravels are given in *Proc. Prehist. Soc. E. Anglia*, ii, 99; and it may be mentioned that 170 St. Acheul implements have been found in a small patch of gravel 80 ft. above the river at Tilehurst, on the opposite side of the river, but 60 ft. below the level of the Tokers Green deposit. Plateau finds are by no means uncommon near the upper Thames, and Dr. Peake has put several on record in the same Society's *Proceedings*, ii, 578; but though their period is fairly certain, their presence in great gravel spreads on high ground has yet to be generally acknowledged and explained.

A rare urn from Suffolk.—Precise details of the discovery cannot now be obtained, but Mr. Guy Maynard, Curator of Ipswich Museum, states that the urn here illustrated from his drawing came from the

same site at Brantham on the Stour estuary as a large cinerary urn covered with finger-tip impressions in the British Museum; also a second urn containing a handled cup, and an undoubted beaker, no doubt from a much earlier interment within a circular ditch, as though in a disc-barrow. Only the upper half of the urn is preserved, but its original biconical shape can be deduced from the Danish specimen here illustrated (right), though it differs from that and other parallels in having the decoration confined to the front, the back being quite plain. The ware is reddish brown, comparatively thin and smooth; horizontal pierced lugs in two pairs on the shoulder were evidently intended for slinging the vessel, but as the lugs were not strong enough to bear the vessel even when empty, the cords must have passed under the base (as shown on left) and only been held in position by the lugs. The full recognition of a background and the vertical arrangement of the pattern are both novelties for Britain; and from inquiries abroad it is clear that the restriction of the ornament to



Urn from Suffolk with parallel from Denmark.

one side is quite exceptional. The best way to elucidate the find is to publish illustrations of it. Of the Lolland urn notices will be found in Knut Stjerna's *Före Hällkisttiden* (*Antigvarisk Tidskrift för Sverige*, del. 19, nr. 2), p. 97, and in *Compte-rendu* of the Prehistoric Congress at Monaco, 1906, vol. ii, p. 55 (Hoernes). Others are figured in Dr. Sophus Müller's *Stenalderens Kunst i Danmark*, pp. 55-7, and there is no doubt that the Danish urns belong to the Passage-grave period in the late Neolithic, but these and others of the type are far smaller than the Suffolk specimen, and have the design impressed with cords or the edge of cardium shell, not incised with a point.

Prehistoric pottery from Weybridge.—By the kindness of our Fellow Dt. Eric Gardner, two remarkable urns hard to parallel in Britain are here illustrated. They are not known to have contained burnt bones or anything else, and were found in digging foundations for a house between Oatlands Park Hotel and Mount Felix, at the east end of the great terrace at Oatlands Drive, in a bank overhanging the Thames marshes near Weybridge, Surrey. Both are exhibited in Weybridge Museum and are in almost perfect order: the ware is yellowish with a leather-brown coating, and both were evidently made without the

wheel. The larger (fig. 1) is $12\frac{1}{4}$ – $12\frac{1}{2}$ in. high, the diameter outside the lip about 7.4 in., and the thickness about 0.4 in. above the groove which runs above the shoulder. One rather like it was found at Cöthen

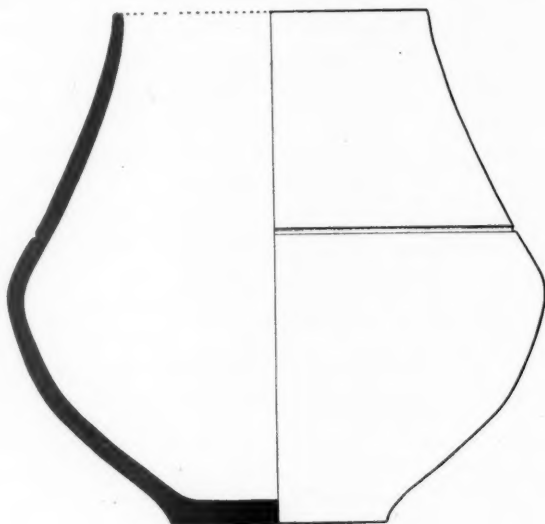


FIG. 1. Urn from Weybridge ($\frac{1}{4}$).

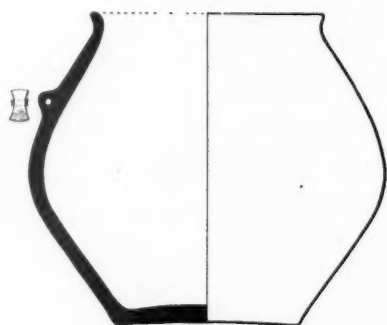


FIG. 2. Urn from Weybridge ($\frac{1}{4}$).

eighty miles south-west of Berlin and dated about 800 B.C. (*Präh. Zeits.*, ix, 56). There is a single pierced lug on the side of the smaller vessel (fig. 2), which measures $7\frac{1}{2}$ in. in height and $5\frac{1}{2}$ in. across the mouth. There is a purplish tone about the surface, and the base is slightly concave. The plain surface of these urns is in striking contrast to those of the Bronze Age, and points to the Early Iron Age, but the

century has yet to be determined. The German parallel suggests the Hallstatt period, and recent discoveries in England confirm the impression that the culture of Central Europe was represented here before the period of La Tène.

Discovery of remarkable Megalithic Monument in Jersey.—Mr. E. Toulmin Nicolle, Local Secretary for Jersey, sends the following report: An *allée couverte* was discovered in September last under the tumulus known as La Hougue Bie, in the island of Jersey. The property, purchased by the Société Jersiaise (local archaeological society) in 1919, consists of about a couple of acres of well-wooded land, in the centre of which is a round tumulus or barrow 40 ft. high and having a diameter of 180 ft. On its summit are two chapels, one of the twelfth century; the other (an extension of the former) was added in the sixteenth century. On the vaulted roofs of these chapels towards the end of the eighteenth century a round tower had been built in brick. Its weight had been disastrous to the vaulting, and the Society during last summer (1924) caused it to be demolished, prior to beginning the exploration of the interior of the mound.

Assuming that any prehistoric monument which existed under the mound would be orientated east-west, an opening was cut on the east side at the ground-level, some allowance being made for the difference in the orientation in prehistoric times. After two weeks' work we had the good luck to strike the first capstone at its very centre.

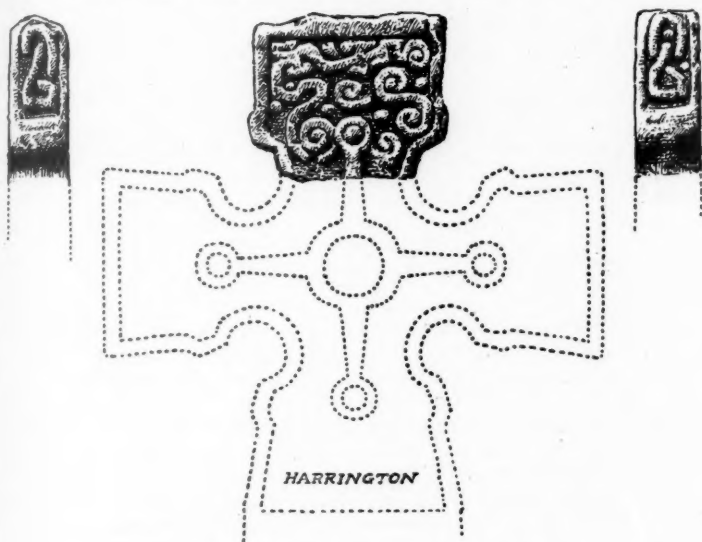
The entrance to the *allée couverte* is about 4 ft. square. The *allée*, which is 40 ft. in length, gradually rises to 5 ft. in height until the main oval-shaped chamber is reached, which is 7 ft. high, 30 ft. long, and 12 ft. broad. The whole monument is composed of massive props and capstones of huge dimensions, and with the exception of the first 15 ft. at the entrance is in a perfect state of preservation. On the north, south, and west sides of the main chamber are side chambers of rectangular form. The floor is covered with sea-gravel.

Only a preliminary examination for the purpose of taking the above measurements has been made. The repair and consolidation of the entrance has to be effected before the scientific examination of the floors can be proceeded with, and this work is being expeditiously carried out.

In the meantime, though perhaps unwise to attempt at this stage to fix the age of the monument, it would appear to be Neolithic. In the wonderful surroundings of the Hougue Bie, with its pagan and Christian monuments intact, Jersey possesses a memorial of the past which is certainly unique in these parts of Europe.

Pre-Norman Cross-head at Harrington, Cumberland.—Mr. W. G. Collingwood, F.S.A., Local Secretary for Cumberland, reports that Mr. H. Valentine of Workington recently called his attention to the upper arm of a cross-head found on 2nd October 1924 at Eller Bank, Harrington. The site is nearly a quarter of a mile south of west from Harrington Church, in a sand and gravel bank on the north side of the road, which is being widened. The fragment is of yellowish sandstone, 12 in. high by 15 in. at the widest, by 5 in. thick. The ornament is hacked,

not smoothly chiselled. On the broader faces is the pelleted spiral-work of late Cumberland crosses, a pattern debased from Anglian scrolls and attributable to the later tenth or earlier eleventh century. On the front is part of a boss-and-spine applied cross, as seen at the Giant's Grave, Penrith, etc. The edges of the stone bear rude knots; on one edge also pellets. The whole cross-head would work out as in the sketch herewith, which shows the front and the edges, drawn from the stone and with help from photographs by Mr. W. L. Fletcher of Workington. Before this discovery no such relics were known at Harrington, though there is the foot of an ancient cross at the church;



Pre-Norman Cross-head at Harrington ($\frac{1}{12}$).

and at Workington (two miles to the north) and at Distington (one and a half miles to the south-south-east) fragments of the same age have been found.

Roman remains at St. Michael's, Cornhill.—Dr. Philip Norman, F.S.A., sends the following note:

In medieval times there was a 'greene churchyard' between the church of St. Michael, Cornhill, and the street of that name. As Stow relates, this disappeared in the reign of Edward VI, 'fower tenementes on the north side thereof being built there, whereby the church' was 'darkened and other wayes annoyed'. The comparatively modern houses on the site were destroyed last summer, the ground being excavated to a depth of about 15 ft. without reaching virgin soil. The modern masonry went down 11 ft. or 12 ft., and beneath were found various remains of Roman walls. The most clearly defined of these

had passed obliquely under the church and was about 5 ft. thick, with a face on its east side. It may, however, have been thicker, as its western face had been cut away. Its base was not reached. It consisted of ragstone rubble (2 ft.) from bottom of trench (15 ft. below pavement), four courses of brick (10 in.), ragstone rubble (remaining 2 ft.). The other walls were apparently of similar construction, but less remained of them.

A Roman site in Ashstead Forest, Surrey.—Mr. A. Lowther, a field-worker on the archaeological survey of Surrey, which is being carried out for the Ordnance Survey Department by a Joint Committee of the Surrey Archaeological Society and the Croydon Natural History and Scientific Society, has found what would appear to be an important Roman site in Ashstead Forest. It is near the camp in the forest and two sites where according to the O. S. map Roman pottery has been found. No excavation has been possible at present, but casual surface work on several occasions has produced fragments of roof-, floor-, and flue-tiles, nails, etc., and a quantity of pottery. The remains, which include one perfect floor-tile, appear to extend over a considerable area, but no foundations have so far been traced. The position, on London clay, seems unusual for a Roman habitation site, but it is hoped that the site may be properly investigated.

Excavations at Whalley Abbey.—Mr. F. H. Cheetham, F.S.A., Local Secretary for Lancashire, sends the following report:

The greater part of the remains of this Cistercian house was acquired in 1922 by the Manchester Diocesan Board of Finance, and has been open to the public, at a small charge, since the summer of 1923. The habitable portion is to be used as a Retreat and Conference House. The late owner (Mr. J. T. Travis-Clegg) some years ago began excavating on the site of the church and uncovered part of the foundations of the north wall of the nave, several pier bases, the lower part of the processional doorway into the east walk of the cloister, the north side of the quire trench, and a portion of the red tiling of the floor in situ. In 1924, for the purpose of making a plan, the Rev. J. E. W. Wallis, Vicar of Whalley, who is custodian of the ruins, carried out certain other work, which has revealed, *inter alia*, the north wall of the chancel of the church, with the foundation of the great north-east angle buttress; the north and a portion of the return east wall of the chapter-house, which projected eastward from the cloister range; the sill and lowest portion of the jamb of a doorway leading from the dormitory to the room over the chapter-house usual in Cistercian houses; portions of the foundations of the passage leading from the cloister to the infirmary; a small chapel with thirteenth-century doorway and window (possibly brought from the former house at Stanlaw); and several valuable indications, hitherto hidden by ivy, of the course of the development of the buildings.

At the request of the Bishop of Manchester, Mr. Theodore Fyfe, F.R.I.B.A., has drawn up an exhaustive report on the remains of the abbey owned by the Church of England authorities, and has made

the more dangerous portions of the ruins secure by means of wooden shores.

The western range of the cloister, which was acquired by the Roman Catholics in 1922, is to be converted into a school on the ground floor (*cellarium*), with a church above.

Excavations in Macedonia.—The Report of the British School at Athens for 1923-4, announces that in June 1924 Mr. W. A. Heurtley, Assistant-Director of the School, undertook a systematic examination of the prehistoric 'Toumba' in the Vardar valley a few miles south of Karasouli. On this mound the successive strata proved to be: (1) on top, Hellenic period, with stone foundation-walls built on the débris of (2) a thick burnt layer, which yielded, *inter alia*, part of a large sub-Mycenaean bowl; (3) below this, a stratum c. 2.50 m. thick, in which two settlements were recognized. In the upper settlement were found stone foundations resting on clay floors, and traces of burnt beams, accompanied by various finds, including a bronze fibula, several bone pins, a schist mould, and much L.H. III pottery (fragments); in the lower, clay floors and the foundations of an apsidal house, with pithoi in situ. The pottery of this lower settlement is also L.H. III, but of an earlier type, and with it were two sherds, possibly L.H. II. Nearly all seemed to be of local fabric; the coarse pottery of this level included numerous fragments of bowls with the typical Macedonian triangular handle, and some incised ware. From this settlement came also a bronze spear-head.

Separated from this by an interval of about half a metre, containing very few sherds, was the lowest stratum (4) which was about 1.50 m. thick and rested on virgin soil. It was characterized by very dark earth and quite distinctive pottery, in which no Mycenaean was found, the typical ware being a fine highly polished black (often firing to red), with white matt-painted ornament (parallel vertical lines or broad flowing bands and loops). Not many shapes could be identified, but large high bowls with strap-handles, and small cups with curving profile and flat bases seemed typical. This ware continued throughout the stratum, uninterrupted. Other classes represented in this level, but in thin layers only, were a rather coarse but well-polished grey ware (mostly wide bowls with incurving rims, painted with dull white lines), and fine, but unpolished and roughly incised red ware (whose shapes resemble those of 'Thessalian A 1'); the presence of the latter (not directly on virgin soil), the resemblance of the black ware (which began earlier than the red) to 'Thessalian Γ 1 a 1', the presence of sherds similar to other Thessalian styles (of classes 'A' and 'Γ'), also the discovery of a few pieces of the 'Dikili-tash' ware, with graphite technique, and of typical Macedonian incised and white-filled, also of the head of a clay figurine of early Thessalian type, raise many interesting problems, which it is hoped that the excavation of the big mound at Vardarovci next year will help to solve.

Excavations at Sparta, 1924.—The British School at Athens has recently issued a summary report of the work carried out by it at Sparta during the past year. The first site to be attacked was that of

the Theatre. This had been much built over in Byzantine times, and the coins found seem to point to an occupation down to about 1250. Many fragments of Byzantine pottery were also discovered, and it would appear that it was in common use by the eleventh century and perhaps as early as the tenth. As to the structure of the Theatre itself the following facts were established. The orchestra represented more than a semicircle, the front lines of the seats at the ends of the *cavea* being formed by tangents to the circle on which the orchestra was set out. In front of the lowest range of seats was a carefully built water-channel to carry off rain-water. The radius of the orchestra taken to the edge of this drain was 12.25 metres. Behind the centre of the orchestra was the *hyposkenion* or front of the Roman stage, built partly of rubble and partly of limestone blocks. The general style of this portion is more reminiscent of the larger theatre at Pompeii than of any theatre in Greece. Behind this stage-front was a massive wall of limestone blocks, which may be taken to represent the foundation of the *scenae frons* of Roman date. It was possible to recognize the stairs dividing the *cunei* at both extremities of the *cavea* and one of the intermediate stairways, which point to the presence of at least seven, and perhaps nine, stairways altogether. The front row of seats was furnished with backs, and there seem to have been loose, separate thrones standing in front of the first continuous row. The containing walls were found to have had a facing of marble blocks, and on the east wall a projecting moulded course was found to be inscribed with well-preserved lists of magistrates who held public offices.

The other portion of the site to be excavated was the summit of the Acropolis. South of the Chalkioikos sanctuary was a small enclosure, with its north and south walls formed of rough boulders. The east wall was almost entirely destroyed, but on the south, instead of a continuous wall, was found a row of large and carefully worked *poros* blocks, which appeared to have supported columns. Within the enclosure was found a large quantity of pottery and bronze and ivory objects, including an early fifth-century bronze statuette of Athena, an earlier bronze representing a siren, and many lead figurines. This great wealth of votive deposits, going back to Geometric, proves the urgent necessity of clearing this site down to the virgin soil.

East of the Theatre a well-preserved Roman pavement, with a design of an elaborate star and diamond motive, was found as well as a well-preserved water conduit, also apparently Roman. North of the Acropolis a domestic or mercantile quarter was partly cleared, and a good deal of pottery, including some Geometric and some moulded Hellenistic wares, was found.

Roman remains near Flint.—Dr. R. E. M. Wheeler, F.S.A., Local Secretary for South Wales, sends this and the following five notes:—Under the auspices of the Flintshire Historical Society, and with assistance from the Manchester branch of the Classical Association and from the National Museum of Wales, Miss M. V. Taylor and Mr. J. A. Petch have continued the excavation of a Roman lead-smelting site at Pentre, near Flint. Foundations of a roughly built oblong shed (workshop or storehouse) have been discovered and, at

a low level, remains of furnace-rakings. Near by were the foundations of some half a dozen furnaces and a short L-shaped structure, possibly also a shed. The finds include pieces of lead, a lead ring, much ore, two grindstones, and pottery extending down to the Antonine period.

Excavation of the Gaer, Brecon.—The excavation of the large Roman fort known as Y Gaer, three miles west of Brecon, was begun during last summer. Two gateways, three corner-turrets, a granary, the head-quarters building, the commandant's house, and a bath-building were explored, and a fine stretch of the outer wall of the fort was cleared. The baths and gateways were well preserved, and are to remain open for a time. One of the gateways, built early in the second century, has projecting guardrooms—the other, standing to a height of seven feet, is probably the most striking of its kind south of Hadrian's Wall. In front of the head-quarters building, built across the main street of the fort, were found the remains of a large fore-hall or 'exercise-hall', of a type especially associated with garrisons of cavalry. Only one other certain example has been found in Britain—at Newstead, near Melrose. Pottery and coins show that the fort, with clay ramparts and timber buildings, was established about the end of the third quarter of the first century, and that the first buildings of stone date from the early years of the second century. Large numbers of tiles bear the stamp of the second legion, and the massive character and excellence of the building suggest the work of legionary troops rather than that of an auxiliary regiment such as is known to have garrisoned the fort. The apparent absence of stone barracks in the praetentura, combined with the omission of a second granary which had been allowed for in the plan, suggest that the work of rebuilding was abandoned before completion; and the evidence of the bulk of the pottery is consistent with the supposition that the suspension of work may have coincided with the removal of troops to the north about A.D. 120 for the building of Hadrian's Wall. Occupation after *c.* A.D. 125 was slight and probably intermittent, and the four or five fourth-century coins (down to Gratian) are not sufficiently numerous to indicate the presence of a garrison at that period. Native or post-Roman occupation, however, is represented by a massive dry-built wall from 8 ft. to 14 ft. wide, which was built as a reinforcement of the Roman wall (itself $3\frac{1}{2}$ ft. thick) on the three weaker sides of the fort. This rough wall covered the remains of the north-east corner-turret and the south gateway. No evidence as to its date was found, but the work can scarcely be later than the early Norman period. The excavations are to be resumed next summer.

Haverfordwest Priory.—During last summer the excavation of this Augustinian Priory has been renewed by a local committee organized by Mr. J. W. Phillips and Mr. F. J. Warren, and financed largely by the Cambrian Archaeological Association. Under the direction of Mr. E. A. R. Rahbula, M.C., F.S.A., the foundations of the cloister arcade and of the western range have now been added to the plan, so that the great part of the lay-out of the priory has been ascertained.

'*Castell Taliorum*', *Llanhilleth*.—This site was first noted by Cox, and described by him (*Monmouthshire*, p. 253) as 'an ancient fortress'.

It bore 'vestiges of subterraneous walls, faced with hewn stone, and not less than nine feet thick'. Subsequent investigations confirmed this vague description, and further brought to light a 'small cannon-ball' (*Arch. Camb.*, 1872, p. 155), a quartzite mortar and 'terra-cotta finial' (? imported), a denarius of 'Trebunius' (? Trebonianus Gallus, A.D. 252-4), a small fragment of Samian, and a metal ring (*Western Mail*, April 30, 1898, and cf. *Arch. Camb.*, 1902, pp. 156-8). The site has been partially trenched during the present summer by Mr. T. Lewis, a student of University College, Aberystwyth. These excavations have revealed what would seem to have been the walls seen by Coxe. They are fairly well built, and of an average thickness of 8 ft. to 9 ft. The plan so far as recovered would suggest a cruciform chamber or tower. The 'finds' up to date include two sherds of green-glazed ware of fourteenth- or fifteenth-century date. Of the precise nature of the building it is as yet unsafe to speak.

Kenfig Castle, Glamorgan.—The survey and excavation of Kenfig Castle has been undertaken by the recently formed Aberavon and Margam Historical Society, under the direction of Colonel M. H. Hunter and Mr. A. J. Richard. The preliminary results seem to indicate that the masonry on the mound represents a small rectangular keep, about 24 ft. wide internally. Sections through the rampart of the bailey—or perhaps rather of the Norman town, since the area enclosed is considerably larger than that of the normal bailey—show that it was made of gravel thrown up from the ditch.

Excavations of St. Davids.—Two ancient chapels have recently been excavated near St. Davids. First, near Whitesand Bay, in a field known as Parc-y-Capel, the traditional site of a chapel of St. Patrick was trenched by Mr. Francis Green and Mr. A. R. Badger, and the foundations of a small oblong building, orientated east and west, were laid bare. It measured 35 ft. by 16 ft. 8 in., and had a south-west door $2\frac{1}{2}$ ft. wide. Within the east end was found the greater part of the altar, still standing to a height of over 2 ft. In front of the altar, with feet towards the east, was discovered the skeleton of a man, whilst two other skeletons lay within the south-west corner. The first burial was associated with white pebbles and limpet-shells, in accordance with customs which are of remote prehistoric origin. The period of the chapel is quite uncertain; the rough dry-built walls are consistent with, but do not prove, a pre-Norman date. A piscina is said to have been found amongst the remains.

The second excavation, carried out by Mr. E. J. Boake, was that of Capel Stinan or St. Justinian's chapel. No altar was found, but the search for it revealed the foundations of an earlier and smaller building within the surviving ruin. Six feet within the east wall was discovered the skeleton of an elderly man rather over six feet in height. The body had been interred on its side, and was associated, like the burial in St. Patrick's chapel, with white pebbles, one being placed in contact with the skull, another against the breast, and a third in the angle of the knees, which were bent. The dates of the later chapel and of its predecessor are alike unknown. Fragments of pottery found

during the excavations range from the fourteenth or fifteenth century to recent times.

Brass at Northleigh, Oxon.—Mr. E. T. Leeds, M.A., F.S.A., Local Secretary for Oxfordshire, reports that the important brass of Thomas de Bekingham, died 1431, in Northleigh Church having been discovered to be loose and the surface of the slab in which it was set to be badly perished, the Oxford Architectural and Historical Society decided to undertake the work of refixing. The work was placed in the hands of Messrs. Gawthorpe & Sons, who entirely refaced and recut the slab according to a rubbing taken in the seventies of the last century, and securely refixed the brass. It is still in part concealed by a portable organ, but it is hoped at some not too distant future to move the organ to another position, when this interesting monument will again become visible.

The Shrine of St. Swithun, Winchester—Mr. Somers Clarke, F.S.A., sends the following note:

May I add one more item of information in relation to the probable position of the shrine of St. Swithun? I have had the pleasure and privilege very many times of studying that inexhaustible treasure house the glorious cathedral of Winchester in every part, including the crypt.

When I first visited the crypt it was filled with earth to a height of several feet above the floor level, but in the middle of the crypt, beneath Bishop Lucy's work, there was a solid pier of rubble rising up to and against the vaulted roof, a structure set up evidently to support a weight on the floor above. Taking notes to ascertain the position of this rubble pier, I presumed that it was placed so as to strengthen the floor of the beautiful building above in the middle of it, coming as it did between the two chantry chapels which now exist on either side of the supposed position of St. Swithun's Shrine.

Some time after I had, as I supposed, undoubtedly located the prop for St. Swithun's Shrine, the dean of those days decided to clear the crypt of its earth-filling and laid his hands also on the rubble pier hereinbefore described, removing a page of historical evidence for the sake of a 'restoration'. Whether there are still any marks on the soffit of the crypt vaulting I should doubt, but I think such existed for some years.

With regard to the statue of St. Swithun found in the crypt, Mr. Le Couteur writes that he now finds that this was not the original fourteenth-century figure, but a much later one, replaced about sixty years ago by another which in its turn has been replaced by the one now in the gable.

The Plumbers' Company—Dr. F. J. Waldo sends the following note:

A review of the second edition of Dr. F. J. Waldo's History of the Worshipful Company of Plumbers, published in 1923, caused Dr. Williamson to inform Dr. Waldo that the two missing manuscript volumes were in his possession.

In his History, Dr. Waldo says that he 'discovered a wooden box four years ago that was for many years in a strong room of the

Library of the City of London Guildhall, which contained a number of manuscript documents belonging to the Plumbers' Company. In 1888 the then Librarian, Mr. Charles Welch, made a note to the effect that these records, of which a list was given, remained in his custody. These documents, it may be added, are open to any citizen who may wish to refer to them.

Dr. Waldo gives a full list of the documents in question, which, on his advice, have been placed for safe keeping in the City Library. Among the records are the Company's Charter of James I (in Latin, 1611) in an excellent state of preservation, on two skins of parchment with the Great Seal attached. It is preserved in a fine stamped-leather case of the same period, lined with fancy paper.

Other records found consist of the original Ordinances of James I, in English, on four skins of parchment, with four seals attached, lodged in a leather case similar to that of the Charter.

Another treasure lighted upon was the original Grant of arms to the Plumbers' Company by Robert Cook, Clarenceux King of Arms. This Grant is dated 1588, and is marked as having been 'viewed and approved in the Visitation of London made in 1634, by Henry St. George Richmond'. The Grant is on vellum, beneath glass, in a worn carved wooden frame, and the vellum is in part mouldy and in need of restoration.

On 29th September 1924, the statutory day for the swearing in of new officers, Dr. Waldo presented the Grant, restored, and placed in a dust-proof pigskin-covered album, to the Court, which Grant is later to be kept in a swansdown-lined album-box. At the same meeting Sir John Knill presented the recovered manuscript account books, in two volumes. The Company now have in their possession a complete set of manuscript account books, dating from 1593 to 1902, a possession which any guild might well be proud of.

Much interesting matter may be gleaned from the Company's Account Books on the subject of City topography and the economic and social life of London at an interesting period of the City's development. Light is also thrown on the origin and regulations of the City Guilds, trade disputes between masters and men, payments for Plumbers' feasts, with curious items of the viands supplied, together with the quantities of 'Wyne, Beere and Ale' consumed by the Plumbers and their ladies and by the apprentices. The first mention of a hall Dr. Waldo has been able to find is in an entry in the Account Book of the Vintners for the three years 1531-4, which states that the Plumbers paid 30s. for the rent of their hall during 1532 as tenants of the Vintners; and that this hall lay between the Vintners' and Parish Clerks' halls in Thames Street, Vintry.

He also states that the first hall built by the Plumbers—in 1639—was in Chequer Yard, Bush Lane, Dowgate, and that this hall was destroyed in the Great Fire of London. The hall was rebuilt on the old site in Chequer Yard in 1669, and, after an existence of nearly two centuries, demolished in 1863, in accordance with an Act of Parliament, for the erection of the Cannon Street Railway Station of the South-Eastern Railway.

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Reviews

Registrum Johannis de Pontissara. Two volumes. 9½ x 6; pp. cxv + 371; viii + 373-892. Canterbury and York Society, 1915, 1924.

A hearty welcome will be extended to the completion of a prolonged task. Years ago, when the present Dean of Westminster was Bishop of Winchester, and Dr. Fearon was his archdeacon and right trusty counsellor, the latter introduced to the bishop an old school-fellow, Cecil Deedes, Prebendary of Chichester. The contents of the Consistory Court needed skilful examination, and the prebendary accepted the task. He saw at once that the episcopal registers were the kernel of the collection, and he made report thereof to the Convocation of Canterbury in 1912. The register of John de Pontissara struck him as of particular value, and the Canterbury and York Society offered to undertake the printing, if the prebendary would be the editor. Part I was issued in March 1913, and even during the war the *fasciculi* appeared most years with fair regularity. The prebendary passed away, near Farnham, in 1920; but his works followed him, for he had transcribed the whole register. Mr. Charles Johnson, F.S.A., took up the editing, and Miss A. L. Manley undertook the index (there are over 40 pages of it) and finished most of it before her death in 1922. So the archdeacon has gone, and the original editor has gone, and the index-writer has gone; but the great result remains to help succeeding investigators.

John de Pontissara is not known to fame or to the *Dictionary of National Biography*, which is not necessarily a synonym for fame; nor is it certain how his name should be pronounced. But forms such as 'Pontisseria', which he used himself in dealing with a debt due to him from the mayor and corporation of his native Pontoise (f. 48 a), and the 'Ponteysera' found in Bishop Bronescomb's register, seem conclusive as to the shortness of the penultimate. But even 'native' must be used with discretion; for the prebendary (following Canon Capes) regards him as 'an Englishman born', and refers to a grant made to John (f. 113 a, b) and his mother, the lady Joan, of the manor of Eastington in Purbeck; which indeed throws no light on his origin, and may only imply the natural desire of a young Frenchman (he was merely 'magister' at the time) for a stake in the country of his adoption. Anyhow, we come upon him first in the diocese of Exeter where, while in minor orders, he was collated to the archdeaconry of Exeter in 1274. Bishop Bronescomb sent him to Rome in 1277, and he was still in Italy when the litigious Nicholas of Ely, who preceded Godfrey Giffard as Bishop of Worcester and was translated to Winchester, died on 12th February 1280. The monks elected Robert Burnell, but the Pope was adamant; and certainly Robert had enough already. The monks' second choice was Richard de la More, archdeacon of Winchester, whose election was somehow suspect, and who refused to allay the suspicions by bribing the cardinals. But, said the cardinals, there is a charming and capable person here from Devonshire; let John de

Pontissara be Bishop of Winchester. We must remember that the register contains not a few documents issued by (or for) 'San Celestino', and that we are thus in an era of strange and sudden and unaccountable selections for the highest offices. The letters that the elect wrote to his friends at the time hardly conceal a certain surprise at his arriving at a leap into a bishopric 'famosi nominis' (f. 52 *a*), which was frequently filled by translation. Alas! that (though its remote fame may last) it is likely to be pulled down into insignificance.

Nevertheless, alike in Church and in State, Pontissara acquitted himself usefully and well. His knowledge of the Continent and his skill in canon law made him a serviceable ambassador to treat with the French king, along with the Count of Savoy, Henry de Laci, Earl of Lincoln, and Otto de Grandisson (f. 141 *a*). The pastoral side of him is more difficult to lay open, because the register contains no lists of ordinations and only a portion of the inductions. So we cannot tell whether he was personally diligent at his Ember-tides or employed a suffragan *ad hoc*. He kept a 'registrum super ordinibus collatis confectum'; but it has not survived. It contained a somewhat rare reference to the 'prima tonsura que vulgariter apud nos corona benedicta nuncupatur' (f. 40 *b*).

The editor has passed beyond our congratulations; so the Canterbury and York Society must accept them in his stead, and it only remains to make a few notes at random. The misprints are few: 'Rgis' for 'Regis' (f. 162 *b*); 'de Cadamo' has a [*sic*] after it (f. 147 *a*), though the form is quite common; Giffard is miscalled Gifford (p. 498, n. 1); on f. 222 *a* 'officio' should be 'officii' and 'pedicte' should be 'predicte'; on f. 222 *b* 'reditibus' should be 'redditibus'.

F. 156 *b* contains an interesting list of those who held knights' fees at Farnham, in which it is stated that the Bishop of Worcester held two; and the editor adds a note suggesting that there is a connexion between this tenancy and Godfrey Giffard's journey abroad with Nicholas of Ely, Bishop of Winchester, in 1273. But the explanation is surely simpler. The list on f. 97 *a* states that Willelmus de Coleville (he is printed 'Colembe' on p. 593) held two knights' fees 'in Hichull et in Cona' (printed 'in Ichull et in Cove' on p. 593) in the hundred of Crondall. But a reference to Mr. Willis-Bund's edition of Giffard's register (Worcestershire Historical Society) will show that Giffard held personal property both at Ichull and at Cone in the county of Southampton (e.g. Bund, pp. 39, 369, 518); he was 'dominus de Ichull', and became so by inheritance from his brother Walter, Archbishop of York (*ibid.* p. 472). His register shows that from his first episcopal year onwards (1268—five years before the journey with which the editor connects the possession) he frequently stayed there.

The transcript on pp. 544–5 of an evidently difficult entry (f. 139 *b*) is worth clearing up if possible. It is a letter from Pontissara to the Abbot of Westminster protesting against the interference of his 'commonachi et subditi' in the affairs of the parish of Witney (3rd December 1299). The 'subditi' are further specified as 'Priorem et Archidominum'. The editor notices the strangeness of the latter term and supposes that it means the abbot; but in that case the order would be reversed, nor can the abbot be reckoned among his own

'subditi'. No doubt 'Archidiaconum' is what is intended, and the original letter may be in the Muniment Room at Westminster, though I cannot recall it. The prior was probably William de Huntingdon, but there is a gap at this time in my list of Westminster archdeacons.

ERNEST WORCESTER.

Three Roydon Families. By E. B. ROYDEN. 12½ x 10, pp. xx + 244. Privately printed by R. & R. Clark, Ltd., Edinburgh. 1924.

While tracing his own pedigree Mr. Royden was led to work out the histories of other families bearing his own or similar names. At the suggestion of our late Fellow Mr. John Paul Rylands he took three of these genealogies and prepared them for publication. The result is the sumptuous volume now under review, upon the preparation, printing, and illustrating of which no pains have been spared.

Each of the families selected, namely, Roydon of Raydon, Ramsey, and East Peckham; Roydon of Battersea and Pyrford; and Roydon of Bromfield, Co. Denbigh, has an interesting history. Apparently they have all been extinct in the male line for a long time. The most important of these families was that which rose to distinction in Suffolk. The Roydons appear as tenants at Raydon in the middle of the twelfth century, but the first to establish the reputation of the family was Robert de Reydon or Royden, a burgess of Ipswich, who prospered like so many others of his class during the Barons War. His profits he laid out in land, then almost the only form of investment, and by this means he eventually acquired the manor of Raydon and much other property in Suffolk, Essex, Norfolk, and Wilts. With the versatility customary among the leading merchants of the time, we find that he personally performed military service in the Scottish campaigns, served as Knight of the Shire for Suffolk in the parliaments of 1305, 1306, 1307, and 1309, and held many public appointments. From him sprang the families of Roydon of Raydon in Suffolk, of Ramsey in Essex, and of East Peckham in Kent. His granddaughter Alice was the ancestress of the Earls of Arundel and of the Earls of Ormond and Wiltshire.

The property which Robert the burgess of Ipswich obtained at Ramsey in Essex, came, over a century later, to James, Earl of Ormond, who forfeited in 1461. Robert de Reydon, then the heir male of the Reydons, claimed the lands under a settlement by Robert his ancestor, and won a suit against the Crown grantee on a pedigree which the author shows was false. The Crown grantee appealed, but the matter was compromised by Reydon paying a round sum and taking the property. The author looks upon the proceedings as a genuine dispute, but it seems much more probable, having regard to the practice of the law at the time, that the action was fictitious and was instituted by Robert for the purpose of getting a Crown title, knowing that his own title was defective.

The Rydons or Roydons of Battersea came from villein stock, and it is interesting to see how they obtained their freedom from the Abbot of Westminster, their entry into the yeoman class, and eventually their budding out into smaller gentry.

The family settled at Bromfield in Denbighshire came from the

Roydens of Kent, who were drawn from the Essex branch by marriage with a Kentish heiress.

The volume is all that a genealogical book should be. It is a careful and accurate piece of work, every statement being fortified with a reference to an original authority or to an appendix of printed documents; the arrangement of the material is good and the family charts clear. Mr. Royden has had the assistance of Mr. John Brownbill, M.A., which is a guarantee of accuracy.

WILLIAM PAGE.

The Teaching of Amen-em-Apt, son of Kanehkht. By SIR E. A. WALLIS BUDGE, Litt.D., D.Litt. 8½ x 5½; pp. xv + 260. London. Hopkinson. 1924. 25s. net.

It was an excellent idea of that prolific scholar, the Keeper of the Department of Egyptian Antiquities in the British Museum, to collect and publish a large series of Egyptian moral texts in chronological order. The student of wise sayings can now follow the evolution of a moral code through two thousand years, as the Egyptians recognized it. The first text goes back to the IVth Dynasty and the latest was written in the XXIst; two were edited or composed by kings, the remainder by scribes and officials. The numerous illustrations, taken from photographs of the manuscripts, show to what a high pitch of art Egyptian calligraphy had reached.

Egyptian and Semite, for all their probable common origin, were far apart by the time their civilizations were rising to a zenith. The Semite whose gloomy dourness produced the English Sunday cannot compare in light-heartedness with the man from the Nile whose sunny cheerfulness pervades all his writings. The grimness of those strange mystics, the Prophets of the Old Testament, who sometimes foresaw what would come to pass, but more often did not, finds little parallel in Egypt; indeed, there is hardly a spark of humour in any early native Semitic writing. Perhaps the drunkenness of the frightened gods in the Babylonian Creation Epic (if it be not Sumerian in origin, as it probably is) passed for wit; otherwise, a long time after the beginning of this era, we have to wait for Bar Hebraeus' Laughable Stories, of which a part is cloacine nastiness, or the Arabian Nights, where sordid indecency is introduced as pleasantly humorous. The very gods of the Semites are bloodthirsty and cruel. The grimness is in marked contrast to the Egyptian, who had so much of the hedonist in him, for whom life held much of the Hans Breitmann philosophy, if not, perhaps, an eternal spree, at any rate a very jolly seventy years or so. Where in all Semitic art can the counterparts of those delightful, light-tripping coryphées of the Egyptian paintings be found? Were all Semitic maids so solemn, so fattish and blowzy, as one is led to believe? The little curl round Cleopatra's lips, in the Egyptian picture of her, invites that caressing word 'witch'; but could ever Pyramus have called his Thisbe so lightly?

So also does a touch of this humour reveal itself in the Egyptian didactic writings. Ptah-hetep, that great opportunist, can put his tongue in his cheek on occasion: 'If thou art one of those who are sitting at table with a man who is greater than thyself, accept what he

gives thee, what is set before thy nose. . . . Cast not a multitude of prying glances upon him, for this behaviour will cause him discomfort. Keep thy face turned downwards until he addresses thee, and speak only when he speaks to thee. Laugh thou when he laughs. That will be exceedingly pleasing to his mind, and what thou doest will be very good behaviour.'—'Follow thy heart's desire as long as thou livest, and do not more than is ordered. Waste not the time in which thou canst follow thy heart's desire. . . . 'Be courteous, and listen to the petition of the petitioner . . . every petitioner rejoices to have his grievance heard.' But above these little indexes to the foibles of human nature rise his deeper thoughts—the one which stamps him as a gentleman, an epithet we so conceitedly withhold from the ancients: 'If thou art with common people make thyself like the peasant folk by concealing thy mind.'

Indeed, these philosophers can at times be very serious, and then they approach nearer to the Hebrew idea. But most important of all (as a reviewer in the *Literary Supplement*, 1924, p. 539, points out) is Erman's tracing of Hebrew borrowing from Egypt, proven by the word *shelōshīm* 'thirty' (Prov. xxii, 20). 'Thou hast seen these Thirty Chapters' says Amen-em-apt (p. 178), but the context has been so altered in the Hebrew that the significance was lost.

Sir Ernest Budge's book not only thus provides translations of the texts, but also gives a hieroglyphic transcript of the Amen-em-apt manuscript.

R. CAMPBELL THOMPSON.

The Chartulary of the Priory of St. Peter at Sele. Edited by L. F. SALZMAN, M.A., F.S.A. 8½ × 5½; pp. xxvii + 118. Cambridge: Heffer, 1923.

The publication of the Hornchurch Documents in the possession of New College has been pleasantly followed by this edition of the Chartulary of Sele, which, together with a large collection of the original deeds, is in the possession of Magdalen College, Oxford.

Mr. Salzman has written an authoritative account of Sele Priory in the Victoria County History of Sussex; and the present volume will prove of undoubted value, not only in illustrating that account, but in adding considerably to the material for the topographical history of that part of Sussex in which the Priory lay. We are glad to notice the hope expressed by the editor in his preface that this publication is likely to be the first of a series of Sussex monastic records.

The Priory was situated to the east of Steyning in the valley of the Adur; and its possessions lay for the most part in the immediate neighbourhood—a tract of country of great natural beauty, and of literary interest in more ways than one. In view of its foundation, originally as a cell to the Abbey of St. Florent in Saumur, by the first William de Braose, whose castle of Bramber lay half a mile to the south-west, it is not unnatural to find in the Chartulary a great number of grants and confirmations made by his descendants, throwing additional light on the pedigree of this important family.

These grants largely consisted of tithes; and tithes, which seem to give rise to difficult questions in all ages, produced in the case of Sele

a crop of disputes and ensuing arbitrations which are duly recorded in the Chartulary. Disputes were indeed inevitable when, in 1477, it was found that 'alle the newe brokyn land of the Courtland no man can telle hoo shall have the tithe by cause it was never sowe past v yer syne' (p. 93). But the arbitrations have an additional value to-day in recording several lists of interesting field names.

The terms on which the Priory porter held his office in 1256 (no. 121); the basis of the difference between gross and net assessment for taxation (nos. 180, 181); the terms of a manumission from serfdom (no. 118); such are some of the points which bear on the social life of the times. And, almost unexpectedly, no. 37—a grant to Roche Abbey in Yorkshire—gives more authoritative evidence for the marriage of Ela daughter of Hamelin, Earl Warenne, with William Fitzwilliam than Hunter was able to give in his allusion thereto in his *South Yorkshire* (i, 334).

It must of course be remembered that the information compiled in a Chartulary is not always infallible. Even monks made mistakes. And this is more especially the case in some of the headings to the documents. Thus no. 48 is entitled a 'charter of the wife of Walter Buriunz . . .'—a statement which is at least doubtful in view of the information given in no. 108. Again, in no. 173 a similar suspicion arises in the case of Walter son of Giles de Grenehurst who is termed in the heading Walter de Mandevile. But this only means that a Chartulary must be used with care.

Mr. Salzman almost disarms criticism by suggesting that a critic's disapproval should 'take the practical form of producing a really good edition of another Sussex Chartulary'. Even with this attractive inducement we find nothing to criticize in the admirable way in which the contents of the Chartulary have been reproduced; and our gratitude is due both to him and to the Fellows of Magdalen for the excellent result of their enterprise.

But, in conclusion, there is one point to which we feel constrained to draw attention. The work of indexing a volume of this kind is by no means an easy task: and this index is not altogether worthy of the book. Thus, for example, the references to Walter the smith of Bedinges (no. 109), Master R. de Boseham, a canon of Chichester (no. 20), and no less a man than William Earl Warenne (no. 37), are not included in the index at all. Another illustration may be taken from the heading 'Bramber, steward of'. The Chartulary contains several documents which were witnessed by the Stewards of Bramber; and it would be possible to compile a chronological list of the Stewards which would be of great value in determining many undated charters in other collections relating to this part of Sussex. But several such entries, including all those which occur earlier in the Chartulary than page 42, are not to be found in this heading of the index; and such a list, if drawn up with the sole assistance of the index, would be incomplete. It is not too much to say that for reference purposes a printed edition of a Chartulary loses a great part of its value if complete reliance cannot be placed on the index.

CHARLES CLAY.

Ancient Earthworks and Camps of Somerset: Being a collection of over one hundred Drawings in Wash and Line of British, Saxon, and Roman Camps and Earthworks to be found in the County of Somerset, including a number not previously recorded. By ED. J. BURROW, F.R.G.S. 11 x 9; pp. 166. With Map. Cheltenham & London: Burrow. 1924. £1 5s.

This work is a companion volume to one on *The Ancient Entrenchments and Camps of Gloucestershire*, which was not received for review in this *Journal*. The author, who is his own illustrator, looks at his subject with the eye of an artist rather than of an archaeologist. Being also a native of Somerset, domiciled in Gloucestershire, he is anxious to make the beauties and the antiquities of his own, as well as of his adopted county, known to the world in general, whether to rambler or to antiquary. But the number of books devoted to earthworks is so slender, that those interested in the study of them, and we see signs that the number of these is increasing rapidly, will be glad of any addition to the small array dealing with the subject. The one before us should appeal both to rambler and antiquary, though the former probably would rather have had the descriptive list of camps embedded in some sort of picturesque padding, in the fashion of the modern topographical guide-book, while the latter would certainly welcome more detail. The illustrations are always charming from an artistic point of view, but vary very greatly in the impression they give of the earthwork illustrated. In some cases they give a very good idea of its general character and its surroundings, in others they only show some detail of the structure; in others, again, little more than the position of the camp is indicated in the landscape, sometimes not very clearly. In one case at least the camp supposed to be illustrated does not appear at all in the drawing. But it must be remembered that the artist has had to cover an amazing extent of country and many of these camps are barely accessible. So we should be grateful to him for what he has given us. In the same way allowances must be made for what seems the most striking deficiency in the book, the absence of any adequate account of Wansdyke. A dyke that stretches beyond the Somerset boundary and right across Wiltshire could not have been fully dealt with in a work confined to the former county, and to treat it as it deserves would need a separate volume. But it is a pity that the few paragraphs devoted to it should twice say that it is 'generally referred to the Saxon Period'. One or two writers may be of this opinion, but there is no evidence to support it and much that suggests an earlier origin. The illustrations are accompanied by small plans of the various earthworks for which the archaeologist will be grateful, but it would be a great additional help if the point from which the illustration was taken were indicated on the plan.

The various works are classified according to the scheme drawn up by the Earthworks Committee of the Congress of Archaeological Societies, but some at least of the earthworks classed under Class A, as Promontory Camps, appear properly to belong to Class B, Hill-top Camps. Among these is Cannington Park near Bridgwater, which, moreover, the author describes as being only 'scarp'd and adapted for defence'. Actually this hill has been fortified by dry-stone walling,

though the walls are so fallen and grass-covered that this is not apparent at a casual glance. Mr. Burrow includes several earthworks not hitherto recorded, though we observe one or two omissions. We may also observe that the 'Earthwork Ring and Avenue' near Walton-in-Gordano, pp. 148-9, is a more elaborate work than is shown in the plan. We gather, however, that Mr. Burrow has not himself seen this work.

ALBANY F. MAJOR.

Liber Feodorum. The Book of Fees, commonly called Testa de Nevill, reformed from the earliest MSS. by the Deputy Keeper of the Records. Part II, A.D. 1242-1293, and appendix. 10½ x 6½; pp. 637-1483. London: Stationery Office. 1923. 40s.

The value of the new edition of *Testa de Nevill* has been amply proved since the publication of the first volume in 1920. The edition printed by the Records Commission in 1807 was one of the most confusing and misleading books of reference to which the student of feudal history found himself compelled to resort, and the difficulties which it presented, to say nothing of its textual errors, have been a stumbling-block even to the cautious and well-informed reader. Sir Henry Maxwell-Lyte has now completed the rearrangement of the mass of disjointed material and has given it compact form. Its various parts have been analysed and set in their chronological order: the text has been revised with the aid of collateral documents preserved in the public records, and each group of its component elements is prefaced by an account of the circumstances which produced it and by critical notes upon its contents. An index is still necessary, but the general arrangement of the returns from each county under hundreds or other convenient headings makes the work in its present state easy to consult, so far as individual places are concerned.

The present volume includes returns of various inquisitions into feudal tenure made between 1242-3 and 1293, and incorporated in the book compiled in 1302, with the addition of some subsidiary documents, of which the most important are extracts from the eyre rolls for the period 1202-49, dealing with serjeanties, wardships, escheats and other kindred matters in illustration of similar subjects touched upon in the main text. More than half the volume is occupied by the returns made in connexion with Henry III's expedition to Gascony in 1242. In May of that year the sheriffs were ordered to levy a scutage of three marks on each fee held of tenants in chief who could not produce the writs granted in consequence of their personal appearance at the muster at Winchester on 27th April, and on fees of minors in the king's wardship. The general inquiry thus instituted into the tenure of fees was extended in detail by further writs issued in October, and, with special instructions covering a wider field than that of military service alone, in December. For some counties the returns are disappointing. Thus from Somerset and Dorset there is a brief list of fees drawn up in accordance with the scanty requirements of the May writs, while another gives merely the names of tenants in chief with the numbers of their fees and the note *breve* attached to the names of those who had obtained personal writs of scutage. On the other hand, there are detailed certificates of the inquisitions made by jury, in pursuance of

the writs of December, in twenty-seven wapentakes of Lincolnshire, and, from the summaries drawn up from these by the sheriff, collecting the scattered fees under the headings of honours and chief lords, some of the information wanting with regard to the few remaining wapentakes can be recovered. Very complete returns of a similar nature come from Herefordshire, of which, as of the returns from a few hundreds of Devon, the originals remain and have been used in the present text. The information from Northumberland is in the form of carefully compiled schedules of fees under baronies, followed by lists of tenures in socage and frankalmoin similarly classified. Although rather fragmentary, the Wiltshire documents illustrate the progress of the inquiry under successive writs, and include a roll of lands and towns held by various serjeanties and by other forms of non-military service.

As a rule, the returns were made in terms of knights' fees or their fractional parts, stating the place and the names of the actual tenants and mesne lords. The editor remarks, with special reference to the Lincolnshire series, that the names of tenants in chief were given with some variations and are not always those of the persons living at the time: the allusions are to the honour rather than to its contemporary lord. Occasionally fractions of a fee were assessed in terms of land, as at Thorganby in Walshcroft wapentake (p. 1019), where Ingram of Santon held eleven bovates out of forty constituting a knight's fee, while Joan de la Laund held half a carucate amounting to $\frac{1}{8}$ of a fee. These land-assessments prevail in the Herefordshire returns, with some variations, and are sometimes stated without exact reference to the corresponding military service. While the tenures in the hundreds of Irchenfield and Webtree, with the exception of two non-military entries in the second hundred, are in terms of fees, in others, e.g. Broxash, the return was made in hidage. In the hundred of Leominster, on the other hand, only one entry refers to hides, while the method in Grimsworth hundred is mixed. Such mixed returns may be noted in other counties, as in Bedfordshire and Buckinghamshire.

Of the other documents in the volume, the most important is the compilation relating to royal serjeanties, representing the results of the inquiry completed by Robert Passelew and his colleagues in 1250. The material taken in 1302 from the roll drawn up at the Exchequer after the inquiry and now lost is here supplemented by extracts from the Pipe roll of 1250 relating to missing counties, and the text of the material from another roll of the same period has been prepared from the original, which is among the records of the Lord Treasurer's Remembrancer. The appendix of extracts from eyre rolls, already noticed, forms a valuable addition to the information given in the documents of 1250, and includes numerous items relating to advowsons and incumbents of churches. Among these may be noted especially the statement in 1231 relating to the church of Knaresborough (p. 1352) and the claim of the archbishop of York to its patronage as against the Crown. For the purposes of Robert Passelew, the alienations of parcels of estates held by serjeanty were more interesting than the terms of tenure. Varieties of serjeanties, however, are numerous: curious examples are those of the serjeanty sometime of William Rufus in Hemingsford, co. Huntingdon, for which he was bound to find

a skein of woollen thread for mending the king's tent when he went into Ireland (p. 1173), and of that sometime of Roland le Pettour in Hemingstone, co. Suffolk, who on Christmas Day did service by making in the king's presence 'unum saltum et sifflettum et unum bumbulum' (p. 1174). William Russel of Papworth, co. Cambridge, had the serjeanty of feeding and clothing two poor daily from the king's alms for the soul of the king, his predecessors and successors (p. 1181). The serjeanty of Heysham, co. Lancaster, was held by Roger son of Vivian, by sounding a horn before the king when he entered and left the county (p. 1190). Coddington, co. Nottingham, had been held by Walter Marsh, by giving the king a pair of scarlet hose (p. 1194).

The text, carefully prepared as it has been, is not free from misprints, e.g. *vereri* for *veteri* (p. 807), *elemosian* for *elemosina* (p. 1006), *carucatas* for *carucate* in an entry relating to Thorganby on p. 1019, *Claro* for *Clara* (p. 1054). Place-names assume curious forms in the original: thus the hundred of Grimsworth, co. Hereford, appears as 'Grimes Wrosne' (p. 802), and the wapentake of Lawres, co. Lincoln, as 'La Wris'. There are some corrupt readings, as 'Legiam de Carni' tousel' in Redesdale (p. 1121), which has been marked as such, and some of the Yorkshire names in the brief document of 1242-3 are not easy to identify with certainty. The scribe, however, responsible for the version adopted, was careless in more ways than one, and on p. 1098 confounded Anketin Mallory's surname with Mauleverer, having previously noted a small group of Mauleverer fees and apparently considering that they and the Mallory half-fee in Bramham, Clifford, and Toulston were held by the same person. 'Gernorby', however, part of a Mauleverer fee in the East Riding, should have been printed 'Geruorby' (Garrowby), and there is a similar error on p. 1121, where 'Suarisdelf' should be 'Snarisdelf'. 'Mautimenant' (p. 1054) is corrected in a note as 'Maucuvenant': the emendation is so obvious that it might have been introduced into the text, as the reading in the original probably admits of the benefit of a doubt. 'Echillington' (p. 1081) for 'Schillington' (Skillington), though a possible form, is at first sight puzzling: on p. 1050 the form is 'Scilington'. From the point of view of place-name study, the volume has an importance quite unforeseen by the entirely practical compilers of the Book of Fees in 1302, and the competent assistance which the editor has received from scholars with special topographical knowledge adds to the excellence of the whole work, in spite of occasional slips and doubtful points such as have been noted, as a signal instance of skill in elucidating a complicated collection of records and creating order out of chaos.

A. HAMILTON THOMPSON.

Papers on the South-western Expedition. No. 1. An Introduction to the Study of South-western Archaeology, with a preliminary account of the excavations at Pecos. By ALFRED VINCENT KIDDER. 11 x 8; pp. viii + 152. 50 plates, 25 figures in text. Published for the Department of Archaeology, Phillips Academy, Andover, Massachusetts, by the Yale University Press. Oxford University Press. 1924. Price 20s. net.

Hitherto Archaeology in the United States has suffered from the

difficulty of attaching even a relative chronology to the objects discovered. Now this difficulty is disappearing in the south-west as stratified sites are being explored in the Pueblo regions of New Mexico and the adjoining states. The volume under review gives an admirable account of the work carried out during six seasons at Pecos, in New Mexico, by an expedition dispatched by the Trustees of the Phillips Academy. The excavations have enabled Mr. Kidder to recognize a number of successive cultures, and by the careful use of distribution maps he has made reasonable deductions as to the general direction of the migrations of those responsible for them. So far he has only established a relative chronology, but as Toltec remains have been found in association with one of these cultures in the south of the state, a prospect is opened up of the formation of a positive chronology, as soon as the various stages of Toltec culture have been equated with the corresponding stages of Maya civilization.

HAROLD PEAKE.

Air Survey and Archaeology. By O. G. S. CRAWFORD, B.A., F.S.A. With maps and diagrams (Ordnance Survey Professional Papers, new series, no. 7). 12 $\frac{3}{4}$ x 10; pp. 39. London: Stationery Office. 1924. 5s.

Earthworks can always stir the enthusiasm of the few, but where the spade is almost impotent, little progress has been made in dating and explaining what is left of them; however, since the war revealed the possibilities of air-photography, the study has received a new lease of life, and foremost among the experts in this novel method of surveying is the Archaeology Officer of the Ordnance Survey. His success at Stonehenge is already familiar to readers of this *Journal*, and the present volume contains many more surprising developments of this new art. The lynchet question may at last be taken as settled, as the date of these step-like banks along many of our hill-sides can now be determined by reference to other indications of ancient agriculture and settlement. The thirteen air photographs here reproduced are in each case accompanied by a key diagram and explanatory text, and a specimen map at the end shows the relation of the earthworks and primitive field-systems to the geography of to-day. Diagrams of Celtic and Saxon villages (only visible from the air) on Salisbury Plain are given in the letterpress, which is itself an important essay on the prehistory of the land; and the enterprise of the Ordnance Survey in encouraging such work and publishing it in such a pleasing and accessible form is to be highly commended and thankfully acknowledged.

Map of Roman Britain on the scale of 16 miles to one inch, with eight pages of introduction. Southampton: Ordnance Survey Office. 1924. 4s.

The Ordnance Survey has done archaeologists a service by publishing at the price of four shillings a map on the scale of one inch to 16 miles showing the principal roads and 'stations' of Roman Britain. The map is tinted in six colours to show heights between sea-level and 2000 ft. (610 metres), and is accompanied by a Roman gazetteer

of five double-column pages with references to squares. The introductory matter includes a brief list of principal events in the Roman period, and mentions the leading books on the subject. The cover is an inspiration in itself and the whole production reflects credit especially on the archaeological department of the Survey. It is now in its second edition and a few corrections have been made. The later names of several main roads have been omitted of set purpose, but it would have been more logical at least to trace the course of the British roads or trackways that even figure on the modern Ordnance maps, such as the Icknield and Akeman streets, as these existed in Roman days and no doubt continued to serve their purpose as secondary roads throughout the first four centuries of our era.

Stonehenge To-day and Yesterday. By FRANK STEVENS. With plans and illustrations by Heywood Sumner. Second edition, $7\frac{1}{4} \times 4\frac{3}{4}$; pp. 90. London: Stationery Office. 1924. 6d. net.

This revised edition is considerably thinner than its predecessor but contains nearly as many pages and is remarkably cheap. It is sold on the spot to visitors, and may be obtained (postage extra) of the Stationery Office in London at Adastral House, Kingsway, W.C. 2, or at 28 Abingdon St., S.W. 1. It sets out 'not to propound any new theories, but rather to reduce the existing knowledge of Stonehenge to a compact compass'; and certainly achieves its object. A work produced by two of our Fellows and adopted by the Office of Works as the official Guide aims naturally at perfection, and only a few blemishes remain. Sarsen stone is sand cemented by silica, not silex (p. 19); and there is a grammatical lapse below the heading 'Lithology of Stonehenge'. From the archaeological standpoint there is little excuse for devoting more than two pages to the Legend of the Friar's Heel; and it is not the two outlying stones, but lines drawn from the centre through those stones, that may (or may not) indicate the point of sunrise at the winter solstice and sunset at the summer solstice (pp. 25, 37). Above all, the ethnological section at the end requires drastic revision, the statements in *Agricola* xi being exactly reversed on p. 89. Otherwise the work is brought up to date: for instance, mention is made of Dr. Thomas's proof that the foreign stones came from Wales; of Mr. Crawford's demonstration of a branch of the Avenue to Amesbury, and the discovery that some at least of the Aubrey holes originally contained standing stones. The observation that the diameter of the outer circle is that of the dome of St. Paul's is certainly helpful, and it might be added that Avebury, which is mentioned three times, would correspond to the curve of Aldwych if the circle were completed to reach the Thames embankment.

History of the Parish of St. Cuthbert, Darlington. By H. D. PRITCHETT. $8\frac{3}{4} \times 5\frac{1}{2}$; pp. 208. Darlington, Dresser & Sons. 1924.

Mr. H. D. Pritchett and his publishers have produced a well-printed and well-illustrated monograph on one of the most important churches of the north of England. The author, as an architect with a lifelong acquaintance with the building, deals with its structure and architecture

in a careful and on the whole convincing way. He has obviously studied every stone of the church, and his knowledge of local quarries is often of much service in determining its architectural sequence, which is not by any means as simple as might appear to the casual observer. Darlington, as a collegiate church of the Durham diocese, with Howden in Yorkshire, in some sense ranks with the three collegiate churches of the diocese of York—Ripon, Beverley, and Southwell, and though far smaller in scale is not altogether unworthy to stand in such company.

Mr. Pritchett describes not only the structure but its fittings and all that appertains to it in considerable detail, and though the arrangement is not of the clearest there is a sufficient index. Had he confined himself to this section of his subject we should have had little fault to find, but his generalities are not as trustworthy as his details, and some of his statements are of that absolute nature which condemns itself; for example, west doorways are not confined to monastic or collegiate churches, as he would have us believe, but are normal to the cruciform plan. Again, the laborious demolition of the preposterous theory that the effigy at Darlington represents Queen Berengaria, argues a sad lack of perspective and some pages of type might well have been saved; the queen, furthermore, was buried at Espau, not Espan, which is in Maine, not Normandy.

The historical part of the book, which prefaces the architectural, is a compilation from the various published sources, without regard to their very varied degree of credibility. The sources of this borrowed information, however, are generally given, and will indicate to the reader what he may accept and what reject. On pp. 17, 18, Bishop Pudsey's seal is provided with a counter-seal which must be more than a century later; and the reference to the 'Bead-roll of Bishop Langley' and the appearance of William the Englishman as Pudsey's architect seem to call for exact documentation. These faults, however, are mainly those of the author's authorities, and we remain in his debt for a detailed architectural account, with excellent plans and illustrations, of a highly remarkable church.

A. W. CLAPHAM.

Jerusalem, 1920-22. Edited for the Council of the Pro-Jerusalem Society by C. R. ASHBEE. 11 $\frac{1}{2}$ x 8 $\frac{3}{4}$. Pp. xvi + 100. London: Murray, 1924. 42s.

The Pro-Jerusalem Society published in 1921 a volume (noticed in the *Journal* of April 1922) descriptive of its activities down to the year 1920; the present book carries on the record for the years 1920-22. As in the previous case the volume is edited by Mr. C. R. Ashbee, late civic adviser to the Governor of Jerusalem, and contains, in addition to an introduction by Sir Ronald Storrs, the Governor, a number of separate papers dealing with various aspects of the history and antiquities of the city.

To antiquaries the most important part of the work of the society, described in chapter II, is the work of conservation, which during the period under review has been confined almost entirely to the citadel and the town walls. The area of the citadel has been cleared and the towers repaired in a manner and with a care which appear unex-

ceptionable; the clearing of the rampart-walk of the town walls is also an excellent work. One point only calls for criticism, and that is the suggested linking up of the south wall of the Haram with the wall from the Dung Gate, by an iron gantry or some other method, across the face of the Aksa mosque. There seems to be not the slightest reason why the two should be linked up, except for the convenience of trans-Atlantic visitors who would thus be saved a quarter of an hour's walk.

The following chapters deal with the other activities of the society—the laying out of new quarters, planting of gardens, new industries, etc. With regard to the first of these, the fears aroused by the town-planning schemes illustrated in the first volume seem little likely to materialize; Talpioth, the chief new Jewish quarter, is to occupy that depressing tract of country between the station and Mar Elyas, where little harm can be done, while others border on the equally depressing Jaffah Road.

The rest of the book is taken up by the series of papers already mentioned. Péré Abel writes, with old-established authority, on the topography of the city in the twelfth century, and his remarks are illustrated by a valuable plan of the city at that period. Mr. H. C. Luke contributes extracts from an unpublished diary of a sixteenth-century pilgrim, and an account of the holdings of the various Christian sects in the buildings of the Holy Sepulchre, illustrated by a coloured plan of the site. A short account of the early eighteenth-century tiles in the Armenian cathedral, and a bibliography of Moslem architecture in Palestine and Syria, complete the archaeological section of the contents.

The editor and publishers are to be congratulated on the format of the volume, which is all that a book-lover could desire—type, illustrations, which are numerous, and binding are alike excellent. The cover is decorated with an ingenious device combining the symbols of the three great creeds of the city: the crescent, however, is a waxing one and, *absit omen*, threatens the other two with eclipse.

A. W. CLAPHAM.

The Doctor's Oath. By W. H. S. JONES, M.A. $8\frac{1}{2} \times 6\frac{3}{4}$. Pp. 62. Cambridge: at the University Press. 7s. 6d.

The ethical principles expressed in the so-called 'Hippocratic Oath' have been regarded throughout the ages as those which should govern the professional conduct of all who follow the practice of medicine. Though the attribution to Hippocrates is probably a traditional tribute to his admitted pre-eminence as 'the father of Medicine', yet there seems to be little doubt that it can be referred to an early date. The oldest manuscript of the Greek text is, however, not earlier than the tenth century, and in this the oath has been modified for Christian use. Although the oath is frequently quoted, no detailed study of the text has hitherto been made. Mr. W. H. S. Jones, who recently edited the works of Hippocrates for the Loeb Classical Library, has collated more than thirty manuscripts, and in this short volume provides an *apparatus criticus* together with a scholarly discussion of the whole problem. While the general tenor of the oath is the same

throughout the manuscripts, yet the verbal variations make it clear that the original text has not been preserved with literal fidelity. As regards the actual date of the oath itself, we have no direct evidence, but Mr. Jones makes a very interesting suggestion that Aristophanes is making a reference to it in the *Thesmophoriazusae* (lines 272-4). The first certain reference to the oath, associated with the name of Hippocrates, is given by Scribonius Largus, a medical writer in the reign of Claudius. From internal evidence it would appear more probable that the oath took form at a subsequent period, possibly in the medical school of Alexandria, or even later.

There is one clause in the oath on the meaning and import of which there is much uncertainty, i.e. that which relates to the operation of lithotomy. The Greek text is itself ambiguous, and it is difficult to assign any reason why this operation should be singled out as reprehensible and placed in the same category as the production of abortion, or the administration of poison. The suggestion, however, that the clause refers not to lithotomy but to castration, which was put forward by Moreau, Charpignon, and others, has little to recommend it, and appears to be negatived by the clause immediately following, 'But I will give place to such as are craftsmen therein.' The operation clause appears in the Latin versions (which are, however, admittedly late) but finds no place in the Christian form of the oath. In the interesting version given in MS. Ambrosianus B, preserved at Milan, which appears to have a different line of descent, this clause is replaced by a further affirmation relating to that concerning abortion. The lithotomy clause, however, is found in the Arabic version given by Ibn abi Usaybia, who died in 1269.

This is but one of the problems raised by the study of the existing versions, and much remains for further elucidation. It is to be hoped that Mr. Jones will continue his researches into this by-path of medical lore.

G. A. AUDEN.

Antiques, their restoration and preservation. By A. LUCAS, F.I.C. 7½ × 5; pp. viii + 136. London: E. Arnold, 1924. 6s.

The discovery of the tomb of Tutankhamen with its marvellous collection of furniture and equipment of every kind and material has once more drawn attention to the problem how best to preserve such objects for future generations. As the decay of antiquities is essentially a chemical question, the prevention of the process must also be based upon a knowledge of chemistry. Mr. Carter and his coadjutors in the exploration of the tomb were fortunate in having on the spot the services of a highly trained and expert chemist. Mr. A. Lucas, Chemist to the Department of Antiquities in Egypt, has drawn upon his wide experience in publishing a handbook for the guidance of those who are engaged in similar undertakings or are in charge of museums. A word of warning is, however, necessary, for zeal may readily outrun discretion, and there are few who possess the qualifications necessary for the application of principles based upon 'a considerable amount of scientific and chemical knowledge . . . founded upon long training and improved by constant practice' (p. 3). Yet it is undoubtedly true that, unless in the hands of one endowed with manipulative skill in

chemical methods, disastrous results may follow well-meaning attempts at preservation. Be this as it may, the author's advice is always practical and the methods of treatment suggested are all of a cautious and 'conservative' type.

Mr. Lucas has, it must be remembered, gained his experience in Egypt under conditions very different from those which obtain elsewhere (with the exception of the deserts of Asia), and the saline content of the soil and the paucity of moisture have produced chemical problems which are not found where other conditions prevail. His advice, therefore, on the conservation of such perishable objects as papyrus, paper, ink-inscribed ostraka and textiles is of unusual value. In connexion with the removal of salts by washing he gives opportune warning that great judgement must be exercised as to the propriety of washing individual objects such as gesso, plaster jewellery, or even stone. In the treatment of corroded silver we are glad to see that he advocates the use of formic acid (suggested by Dr. A. Scott). The results of this treatment are in general highly satisfactory. In dealing with the ravages of insects and wood-borers he does not mention the use of ortho-dichlor-benzol, which is much more efficacious than naphthalene, and has peculiarly penetrating powers, causing rapid death to the grubs. We understand that it has been extensively used in the treatment of the roof-beams in Westminster Hall. In applying this substance it is well to use fingerstalls or to wipe the fingers frequently, as it has an unpleasant action on the skin somewhat similar to that of carbolic acid. It may be mentioned that interesting information on the causes of the disintegration of ancient glass is to be found in a paper recently read by Mellor before the Society of Glass Technologists.

It is somewhat strange that so little attention has hitherto been paid in England to this application of chemical knowledge in the service of archaeology. In the new edition of Rathgen's *Konservierung von Alterthumsfunden* (1920), of which we believe the second volume has not yet been published, there are references to 36 publications quoted in the text, and of these only one is an English work, viz., *The Museums Journal*. We may perhaps console ourselves with the thought that had Mr. Lucas's book been published in time, it would doubtless have borne that journal company in his select list.

G. A. AUDEN.

Calendar of Early Mayor's Court Rolls, preserved among the Archives of the Corporation of the City of London. A.D. 1298-1307. Edited by A. H. THOMAS, M.A., Clerk of the Records. Printed by order of the Corporation under the direction of the Library Committee. 10 x 6; pp. xlv + 304. Cambridge: at the University Press. 1924. 15s.

The war no doubt caused the further publication of Calendars of the Records of the City of London to be suspended, and the present volume is the more welcome as showing that the work has after a long interval been resumed. The nine Rolls of the Mayor's Court which have now been calendared by Mr. A. H. Thomas cover the period from 22nd May 1298 to 2nd August 1307. With the exceptions of a few membranes belonging to 1377 they are the only survivals of the original

Rolls of the Court, though proceedings are sometimes recorded in the Letter Books, and a series of Pleas and Memoranda Rolls between 1327 and 1484 contains a record of the more noteworthy cases. It is possible that the original Rolls of later date than 1307 may have perished in the Great Fire of 1666. But Mr. Thomas suggests that it is more probable that the Rolls were taken away by the successive Mayors together with other documents and correspondence relating to their year of office.

In his introduction Mr. Thomas traces the origin and development of the Mayor's Court. The Husting Court could by charter be held only on Monday and Tuesday. But early in the thirteenth century a custom grew up under which less important actions were postponed for the deliberation of the Mayor and Aldermen on other days. By the middle of the century the Mayor and Aldermen sat regularly to hear actions between foreign merchants and to some extent between citizens. About the same time the increased business of the Husting Court led to the crowding out of pleas of plaint. Though the extant Rolls do not begin till 1298, references to the proceedings in the Mayor's Court at an earlier date occur elsewhere. In 1280 actions of error by plaint were regularly heard before the Mayor, whose Court about the same time dealt with proceedings against disorderly persons and other offenders. The Sheriffs' Court seems down to that time to have been more frequented than the Mayor's Court; but there were matters with which the former could not deal and this with the transfer of business from the Husting Court led to the predominance of the Mayor's Court, and the Rolls now calendared show that by the close of the century the Mayor's Court was fully established.

In the latter part of his valuable introduction Mr. Thomas discusses the procedure of the Mayor's Court with special reference to details and usages peculiar to London. Actions began with a plea in writing which in process of time approximated to the common form familiar in Chancery Proceedings. In cases of felony it was a privilege of the City that the accused person should be liberated on mainprise. The ancient method of proof in the City was by an oath, known as a *lex* or law. *The Great Law* which was used in cases of murder and house-breaking had to be supported by thirty-six oath-helpers, eighteen from each side of the Walbrook. *The Middle Law* of eighteen oath-helpers had to do with cases of maiming. The Great Law was in use in the thirteenth century, but the Middle Law was only a dim memory in 1216; both were virtually obsolete before the Great Iter of 1321. *The Third Law* of six oath-helpers in trespasses was still operative in certain cases in the Mayor's Court. Another method of proof was the Trial by Witnesses, a form of procedure on which the Rolls are particularly informative. The commonest method of proof in the Mayor's Court was, however, by jury. Mr. Thomas points out how these Rolls illustrate that the early jury was deliberately impanelled from persons who had knowledge of the facts. From the evidence of the Rolls Mr. Thomas concludes that the Court seems to have been inspired by a sincere desire to do right.

Important though the Rolls are for the illustration of the history of judicial procedure, they are also of value for the light which they

throw on other incidents in the life of London citizens. One early complaint has to do with the grave damage done to the inhabitants of Aldgate Ward by the roystering of minstrels, tabor players, and trumpeters. In 1302 one Manettus, with other unknown persons, filled an empty cask with stones and set it rolling down Gracechurch Street, to the great terror of the neighbours. Most curious is the story of William, rector of St. Margaret Lothbury, who was attached for having four putrid carcasses of wolves sent to him from abroad in a cask; he pleaded that he had procured them as a cure for a disease called 'Le Lou'; all the physicians and surgeons in the City were summoned to give evidence, but said they could not find in their books any disease for which wolves' flesh could be used; so William was delivered for judgement to the Official of the Archdeacon. There are occasional references of topographical interest, as to the sokes of St. Bartholomew, and the bishop of London, and 'le Kaytifbreg' near Smithfield. In 1306 a jury of the venue round Cornell and the House of the Friars Minor was summoned to inquire whether John de Offington, mason, had threatened the King's masons, who had been brought to the City for the Queen's work, that if they accepted less wages than the other masons of the City they would be beaten, in consequence of which the Queen's work was unfinished. This dispute no doubt arose out of the building of the Grey Friars' church by Queen Margaret. In 1307 there is a reference to the 'Coldhakber' in All Hallows at Hay; the form is curious, but it clearly refers to the famous house 'The Coldharbour', and is the earliest instance of the use of the name. Mr. Thomas by a slip identifies the Coldharbour with Pountney's Inn; this is the solitary flaw which I have detected in his editing.

C. L. KINGSFORD.

Calendar of Institutions by the Chapter of Canterbury Sede Vacante.

Edited by C. EVELEIGH WOODRUFF, M.A., with additions and notes by IRENE JOSEPHINE CHURCHILL. $8\frac{3}{4} \times 5\frac{1}{2}$. Pp. xviii + 182. Kent Archaeological Society, Records Branch, vol. viii. Canterbury: Gibbs & Sons. Issued to subscribers.

The compiler of lists of incumbents of benefices, in the conscientious pursuit of his favourite sport, generally finds that he has to hunt far afield and draw many coverts before he can give a good account of his doings. For possible records of institutions during a vacancy in a diocesan see the archiepiscopal registers at Lambeth are easily accessible; but it is probable that few people make a special journey to Canterbury on the chance of discovering similar entries in the registers kept by the prior and convent, and subsequently by the dean and chapter of the metropolitan church during vacancies of the archbishopric. The present calendar removes the need of such an excursion. Its contents are naturally of more value for the diocese of Canterbury and its peculiar jurisdictions than for the suffragan dioceses. For these, the only entries before the death of Archbishop Morton in 1500 refer to the three Welsh sees of Bangor, Llandaff, and St. Asaph, whose early registers unfortunately no longer exist. With a few exceptions from Bath and Wells, Chichester, Lichfield, Norwich, and Winchester, between 1500 and 1504, the rest belong to the period of Cranmer's

imprisonment, when eleven sees fell vacant, and that between the death of Pole and the consecration of Parker, during which eighteen sees in the province out of twenty-two are accounted for. This is perhaps disappointing; but the number of institutions recorded is considerable, and a comparison of these with printed lists for various parts of England shows that the volume is frequently of service in filling gaps.

The entries occasionally supply details for the biography of well-known clerks, e.g. the institution of Robert of Bardelby to Sandhurst in 1294, and of Christopher Urswick to the archdeaconry of Norfolk and the church of Coston in 1500. Other names which may be noted are those of Thomas of Cobham to the custody of Boxley in 1294, Richard of Bury to Croydon in 1327, and Thomas Cranleigh to Bishopsbourne in 1396: the first two, the 'good clerk' and the reputed author of *Philobiblon*, became bishops of Worcester and Durham respectively, while the third was the warden of New College and archbishop of Dublin whose brass is in New College chapel. When, in 1381, John Waltham, afterwards bishop of Salisbury, was instituted to Hadleigh in the archbishop's Suffolk peculiar, his proctor was Thomas Haxey, whose name came into prominence in the constitutional troubles of the end of Richard II's reign. John Max, a Premonstratensian canon, apparently of Lavenden, who was instituted to the vicarage of Shotteswell, co. Warwick, in 1503, is probably identical with John Max, abbot of Welbeck and bishop of Elphin, who acted as suffragan in the diocese of York later in the century.

In this connexion, the exchange (August 1349) by Simon Islip of the church of Pagham for a canonry of Lincoln and the prebend of 'Ketensmede' with Robert of Askeby involves a problem. As only the see of Canterbury was vacant at this time, some corresponding record might be expected in the episcopal as well as the chapter registers at Lincoln. None, however, exists, nor was there a prebend of 'Ketensmede' in Lincoln, unless Ketton is meant, which, as it consisted of a parish church, could hardly be so described. Possibly there is a confusion between a prebend in Lincoln, of which Islip was long a canon, and the prebend of Keton in St. Martin's-le-Grand. The exchange, on Islip's part, was not of long duration, as he was promoted to the archbishopric before the end of the year.

Place-names are correctly identified for the most part. An institution to the vicarage of 'Bourdechalke', dioc. Salisbury (p. 16), is repeated as to that of 'Brodchalke' on p. 19. Whether, as the editors seem to think, this implies separate admissions of the same man to the neighbouring vicarages of Bower Chalk and Broad Chalk, is uncertain: the first church, at any rate, was a chapel dependent on the second, and had no separate vicarage. 'Layfeld' (p. 45) should be 'Laxfeld'; 'Eweredo' (p. 73) should probably be 'Gweredo' (Gwardog in Llantrisant parish, Anglesey); and 'Wentwog' (p. 80) is a misprint for 'Wentlloog'. We notice the modern forms 'Ardingley' (p. 3) and 'East Hoathley' (p. 59), which Sussex topographers will find strange. 'Egloussall' in Anglesey (p. 73) is rightly identified with its more usual name Llangadwaladr: on this principle, it would have been better to substitute for 'Merthyr' (p. 82) the name Llanystumdwy,

commonly given to the parish church of Merthyr, the alternative name of Criccieth. One curious form which occurs is 'Skoshockeold' as an alias of 'Nockehold', i.e. Knockholt in the old parish of Orpington (p. 67).

There are some slight errors of the usual kind caused by the confusion of similar letters, e.g. 'Ystele' for 'Yftele' (pp. 57, 95), 'Orfewik' for 'Orsewik' or Urswick (p. 92), which appears as 'Uswicke' on p. 37, and 'Manger' for 'Mauger' (p. 71). The forms 'Cana' and 'Cant[is]' for the same surname on p. 70 are odd, and the suggested extension of the second is very doubtful. Beyond notices of institutions, a few other entries occur of a slightly different kind, e.g. two unions of benefices in the city of Canterbury in 1349 (pp. 27, 28). The admission of a master to the grammar-school of Canterbury in 1375 (p. 29) should also be noticed. The appendixes include the text of the composition with regard to jurisdiction *sede archiepiscopali vacante* between the prior and convent and the suffragans of the province, made after the translation of Kilwardby to the cardinal bishopric of Porto in 1278; two ordination lists of 1328, when orders were celebrated in the cathedral church by Peter, bishop of Corbavia; and a few additional entries from another source, one of which is the certificate of the notification to Bishop Edington of Winchester of his election, which went no further, to the primacy in 1366. There is a good index.

A copy of this book should be at hand in diocesan registries for reference by students. The punctuation and somewhat irregular spacing of words occasionally obscure the precise meaning of an entry; but the labour involved in compiling the volume has been well spent, and the large geographical area which its contents cover gives it much more than a local interest.

A. HAMILTON THOMPSON.

The Babylonian Epic of Creation. By S. LANGDON, M.A. 8 x 5½; pp. 227. Oxford: at the Clarendon Press, 1923. 16s.

In this volume the professor of Assyriology at Oxford has published a transcription and translation of and commentary on the Babylonian tablets of the Epic of Creation (the *Enuma elish* series), as restored from the recently discovered tablets of Asshur. In 1902 the late Professor L. W. King, of the British Museum, published the most complete edition of the Epic which the available sources enabled him to make, chiefly from Assyrian copies of the Babylonian originals, preserved in the library of Ashurbanipal at Nineveh, now in the British Museum. Professor Langdon has now been able to add the evidence of the tablets found at Asshur (Kala'a Sherkat) by the Germans, which are equally transcriptions of Babylonian originals, with certain characteristic alterations, such as the substitution of the name of the Assyrian god Asshur for that of the Babylonian Marduk, and so forth. Work such as this, which is of a highly specialized kind, is difficult to discuss without launching out into a maze of mythological speculation which would be of little interest to readers of *The Antiquaries Journal*. Suffice it to say that Professor Langdon presents us with results commensurate with his learning, but it is a pity that he does not do so in a better guise. He really ought to have had his manuscript revised by some friend at Oxford. Occasionally, but very rarely,

his translations are of the kind that remind us of our schoolboy efforts which provoked the polite, sarcastic inquiry from our dominie whether we did not suppose the man meant something sensible when he wrote it. How can a 'dumbfounded goddess' go from a city *wailing*: 'that is, his woman wailer who from the city (goes) wailing'? (p. 49). [*The son of Asur*] who goes not with him, saying, 'Not am I a sinner' and 'Not shall I be wounded' (p. 37), reminds us of the literal cribs to the classics that we bought in the Broad, or of the laudable efforts of the late Mr. Bohn. The reader who is acquainted with Semitic tongues does not need to be thus forcibly reminded of the position of the word *la* in the Semitic sentence, while he who is not does not need to be thus forcibly informed of a fact that would not interest him. And on p. 39, why insist on the position of the Assyrian verb in 'the city fell into tumult because of him and fighting within it they made'? Sometimes, of course, what seems to be quite unintelligible is not the fault of Professor Langdon, but of his texts: thus on p. 39 we read 'The reed pigsties which are before the way of Nebo, as he comes from Barsippa to adore him, Nebo who comes and stands over (him) and regards him: that means this sinner who is with Bel'. This sounds like insane gabble little better than that treasure-house of nonsense, the Egyptian 'Book of the Dead', but as a matter of fact it is susceptible of explanation as an episode in a ritual procession. One does not want learned translators to make these Dêlphic utterances worse by assyrianizing the positions of English negative particles and verbs. Professor Langdon essays to explain some of the complicated ritual acts described in the texts, but hardly does so successfully when, on p. 31, he informs us that 'The ritual now mentions a cavalryman who with a sweet fig . . . and who being brought in before the god (Marduk?) shows the fig to the god and to the king'. *Cavalryman!* Why not mounted policeman? What is 'a consoling satyr' (p. 185)? Very often Professor Langdon is simply infelicitous in his choice of a word. Thus, to speak of the gods 'fuming' (p. 95) and 'babbling' (p. 127) is to import a comic element into the scene which was presumably not intended by the priestly scribe: both words have in English a humorous inflexion. Then how can one's 'countenance beam *profusely* as the sun'? (p. 173). It might perspire profusely *in* the sun (our italics). And what is a 'procreatures' (!): 'Mother Tiamat as *procreatures* cursed us' (p. 111). On p. 119 she appears more correctly as 'our procreatress', but *que diable fait-elle dans cette galère?* Professor Langdon presumably means 'progenitress', which would be a different matter. On p. 131 to talk of a 'hatchet' in the same sentence as a sceptre and a throne ('they added unto him, a throne, and a hatchet') is a bit of an anticlimax: he should have used the more noble word 'axe': hatchets are things one dabs with at refractory joints of meat or billets of winter firing. We have another anticlimax in 'And so the great gods sat down. A feast they made as they sat down to the festival. After they had made music therein, and had drunk beer in Esagila, *the table was cleared away*. Laws were fixed and plans *designed*. The stations of heaven and earth were arranged *among* the gods all of them' (pp. 176-7). Here the italics denote a doubtful reading, but they also direct attention to the unnecessarily colloquial phrase 'the table was cleared away', which sentence

gives a grotesque touch to the whole scene. And in English one does not call a dead body a 'cadaver' (p. 147), nor is the capital city of a country its 'capitol' (p. 8). This last is not a misprint, as it occurs at least three times on the same page: Professor Langdon has evidently got confused with the American phrase 'state capitol', which is a building, usually in its capital city. Why is Magi (!) used as a singular (p. 54): 'a magi goes wailing'; 'the magi brings Bel's garments'; 'the Magi who goes before the Beltis of Babylon' (p. 39)? Here we frankly cannot imagine what the learned professor was thinking about. *Videat professor!* he must really be more careful in future to see that his admirable work is not marred in this unnecessary way by the appearance of extraordinary phrases and weird minor errors which, unimportant in themselves, yet spoil a book, and cannot be passed over by a reviewer.

H. R. HALL.

Periodical Literature

The English Historical Review, October 1924, contains the following articles:—The beginning of the year in the English Chronicle, by R. H. Hodgkin; Borough representation in Richard II's reign, by Miss Mary McKisack; The Anglo-Dutch alliance of 1678, part 2, by C. L. Grose; George Finlay as a journalist, by W. Miller; An East-Anglian Shire-moot of Stephen's reign, 1148–53, by Miss H. M. Cam; William Duncombe's 'Summary Report' of his mission to Sweden, 1689–92, by J. F. Chance; The authorship of the 'Essai sur le système militaire de Bonaparte' (1810), by C. S. B. Buckland; Documents illustrating the reception and interpretation of the Monroe doctrine in Europe, 1823–4, by Harold Temperley.

History, October 1924, contains the following articles:—The revival of Greek in Western Europe in the Carolingian age, by M. L. W. Laistner; What were the 'Provisions of Oxford', by E. F. Jacob; Two epochs of sea-experience, by Prof. Callender; A plea for the teaching of historical geography, by C. R. Cruttwell; Historical revisions: the general election of 1784, by Prof. C. E. Fryer.

The Cambridge Historical Journal, vol. 1, no. 2, contains the following articles:—Some aspects of local autonomy in the Roman Empire, by Prof. J. S. Reid; The Marshalsy of the Eyre, by Helen M. Cam; Napoleon and Sea power, by Prof. J. Holland Rose; British policy in the publication of diplomatic documents under Castlereagh and Canning, by Prof. C. K. Webster and H. W. V. Temperley; The Eastern crisis of 1840: extracts from the unpublished papers of Lord John Russell, by Dr. G. P. Gooch; Lord Elgin in India, 1862–3, by Prof. J. L. Morison; The end of Roman rule in north Gaul, by Prof. J. B. Bury; Tithe surveys as a source of agrarian history, by Dr. J. H. Clapham; A forgotten prophecy (Greece 1820–1), by C. N. Crawley; Some additions

to the Manuscript records at Cambridge: i. The Donald Mackenzie Wallace papers, ii. MSS. of the Duke of Argyll (1711-12), iii. The Ward papers; The Editorial methods of Sir Adolphus Ward: i. The Cambridge Modern History, by Sir Stanley Leathes, ii. The Cambridge History of British Foreign Policy, by Dr. G. P. Gooch.

The Journal of Roman Studies, vol. 12, part 2, contains the following articles:—Studies in the Roman Province Galatia, by Sir W. M. Ramsay; The site of the battle of Pharsalia, by J. P. Postgate; Some reflections on the teaching of Roman history, by G. H. Stevenson; A note on Prof. Bury's 'History of the later Roman Empire', by N. H. Baynes; Some historical coins of the late Republic, by H. Mattingly; Roman Britain in 1923, by M. V. Taylor and R. G. Collingwood; The campaigns of Servilius Isauricus against the pirates: a correction, by H. A. Ormerod.

The Numismatic Chronicle, vol. iv, parts 1 and 2, contains the following articles:—Greek coins acquired by the British Museum in 1923, by G. F. Hill; The Persian standard in Ionia, by J. G. Milne; The Roman 'Serrati', by H. Mattingly; The Legionary coins of Victorinus, Carausius, and Allectus, by Sir Charles Oman; Some notes on late Roman mints, by A. Alföldy; The Frequency-Table, by G. F. Hill; Anglo-Saxon acquisitions of the British Museum, by G. C. Brooke; Indian coins acquired by the British Museum, by J. Allan.

Proceedings of the Huguenot Society of London, vol. 12, no. 6, contains the following articles:—The Presidential address, dealing with the persecution of the Huguenots in the Cevennes, by Sir Robert McCall; Human documents: notes from French Protestant registers and other sources, by C. E. Lart; Notes on Sir Samuel Romilly and Étienne Dumont, by Sir William Collins; A note on the history and aims of the Société de l'histoire du Protestantisme Français, by Pasteur J. Pannier. Vol. 13, no. 1 of the same Proceedings contains the following:—The Huguenots in Kent, by Sir Robert McCall; Human documents: Procès contre les Cadavers, by C. E. Lart; Huguenot London: Covent Garden, Savoy, and the Strand, by W. H. Manchée.

Annals of Archaeology and Anthropology, University of Liverpool, vol. 11, no. 2, contains the following article of archaeological interest:—Report on the excavations on the site of the Deanery Field, Chester, by Robert Newstead.

The Library, vol. 5, no. 2, contains the following articles:—Italian books printed in England before 1640, by H. Sellars; Printing at Venice to the end of 1481, by V. Scholderer; Nicholas Ling and *England's Helicon*, by J. W. Hebel; The early French books at the British Museum, by A. Tilley; A supposed Foligno edition of 1474, by V. Scholderer; Massinger Corrections.

The Geographical Journal for September 1924, contains an article on the Wilton Codex of Ptolemy Maps, by E. H[eaewood], and that for October, notes on the march of Alexander the Great from Ecbatana to Hyrcania, by A. F. v. Stahl.

The Mariner's Mirror, vol. 10, no. 4, contains the following articles:—The Santo Cristo of Lepanto, by H. S. Vaughan; The first plan of European dominion in the Indian Ocean, by Admiral G. A. Ballard;

John the Painter, by W. Senior; Dampier's voyage of 1703, by Dr. B. M. H. Rogers; Shipbuilding abuses in the seventeenth century, document contributed by Major E. W. H. Fyers.

The Journal of the Society of Army Historical Research, July 1924, contains the following articles:—Scots soldiers under the Prussian Flag, by J. M. Bulloch; The siege of Gibraltar by the Spaniards, 1727, by Lt.-Col. J. H. Leslie; The Roscommon militia, by W. G. Strickland; The diary of Lt. C. Gillmor, R.N.—Portugal 1810, with introduction and notes by Lt. H. N. Edwards; Old printed Army Lists, by Lt.-Col. J. H. Leslie; A warrant for Musters in Suffolk, by Lord Cottesloe; The Flodden campaign, 1513, by Col. Sir Bruce Seton.

Folklore, vol. 35, no. 3, contains an article by Prof. R. M. Dawkins on ancient statues in medieval Constantinople.

Transactions of the Oriental Ceramic Society, 1923-4 (printed for private circulation only) contains the following papers:—The earliest arrivals of pre-Ming wares in the West, by Bernard Rackham; Fragments from Fustat, by O. C. Raphael; The chemistry of the Temmoku glazes, by A. L. Hetherington.

Ancient Egypt, 1924, part 2, contains the following articles:—The British School in Egypt; The origin of the XIIth dynasty, by Sir Flinders Petrie; Ancient clepsydrae, by R. W. Sloley; Maqrizi's names of the Pharaohs, by M. A. Murray. Part 3 contains the following articles:—Origin of the great Hypostyle hall at Karnak, by R. Engelbach; Who were the Amorites? by Prof. Sayce; The historical value of names, by Sir Flinders Petrie; The branch on prehistoric boats, by Dr. J. Capart.

Publications of the Bedfordshire Historical Record Society, vol. 8, contains the following articles:—Stagsden and its manors, by J. Steele Elliott; Three records of the alien priory of Grove and the manor of Leighton Buzzard, by R. Richmond; Ancient Bedfordshire deeds: 3, Northill, Southill, Old Warden, by F. A. Page-Turner; Harlington churchwardens' accounts, by J. H. Blundell; Some Bedfordshire assessments for the taxation of a Ninth, 1297, by Mrs. Hilary Jenkinson; Institutions to ecclesiastical benefices in the county of Bedford, 1535-1600, by Canon C. W. Foster; Declaration of Common rights, Eaton Bray and Totternhoe, 1475, by F. Puttnam; Catsbrook at Biscot near Luton, by W. Austin; Wingate of Streatley and Harlington, by J. H. Blundell; Variant spelling of Thurleigh; The meeting place of Manshead hundred, by G. H. Fowler.

Proceedings of the Dorset Field Club, vol. 45, contains the following articles on archaeological subjects:—Exhibits in the Dorset County Museum relating to the Napoleonic era, by Capt. J. E. Acland; Sir Stephen Glynne's Notes on some Dorset churches (continued); The SS. Collar in Dorset and elsewhere, by Canon J. M. J. Fletcher; Armorial bearings in the old houses of Dorset, by His Honour J. S. Udal.

The Essex Review, October 1924, contains the following articles:—Burnt Mill, by Rev. J. L. Fisher; The dramatic instinct in Essex, by A. J. G. Nicholson; Some of the literary associations of Epping Forest, by A. L. Clarke; Sheering church, by Rev. J. L. Fisher; Crouched Friars, Colchester, by L. C. Sier; Some pages from an old rent book

[of John Aylmer of Mowden Hall]; A gossip on field-names, by J. French.

Transactions of the Southend-on-Sea Antiquarian and Historical Society, vol. 1, part 2, contains the following articles:—Roman and Saxon settlements at Southend-on-Sea, excavated in 1923, by W. Pollitt; The Compotus of the manor of Earl's Fee, Prittlewell, 1515, by J. F. Nichols; The old Theatre, Southend, by J. W. Burrows; Milton Hall in 1500, by J. F. Nichols; Arthur Dent and John Bunyan, by H. W. Tompkins.

Transactions of the Woolhope Naturalists' Field Club, volume for 1921, 2, and 3, part 2 (1922), contains the following articles:—The diary of Joyce Jefferies, a resident in Hereford during the Civil War, by F. R. James; A Huguenot Glassworks near St. Weonards, Herefordshire, by B. P. Marmont; Fords and Ferries of the Wye, by A. H. Lamont; The church of Eaton Bishop, co. Hereford, by G. Marshall; Some remarks on the ancient stained glass in Eaton Bishop church, co. Hereford, by G. Marshall; Notes on the manor of Sugwas in the county of Hereford, by G. Marshall; A Brobury Rent roll of 1716, by Rev. H. F. B. Compston; The manor of Courtfield, by Sir Joseph Bradney; Hall Court and Sir John Coke, by H. Reade; An architectural account of Hereford Cathedral, by W. E. H. Clarke; Excavations on the site of Ariconium, by G. H. Jack.

Transactions of the Leicestershire Archaeological Society, vol. 13, part 1, contains the following papers:—The old Town Hall of Leicester, by T. H. Fosbrooke and S. H. Skillington, with a note on the stained glass in the mayor's parlour, by A. B. McDonald; The rectors of the chapel and parish church of Noseley, by A. Hamilton Thompson; George Fox and Leicestershire, by Gertrude Ellis; The manor and advowson of Medbourne, by G. F. Farnham and A. Hamilton Thompson; Hallaton: the church, by A. Herbert, notes on the descent of the manor, by G. F. Farnham.

Transactions of the London and Middlesex Archaeological Society, N.S., vol. 5, part 1, contains the following articles:—The earliest views of London, by W. Martin; Ludicus Scenicus, by W. Martin; The church and priory of St. Helen, Bishopsgate, by Rev. S. T. H. Saunders; Notes on the early history of the Worshipful Company of Leathersellers, by C. F. Sutton; A few notes on the Mercers' Company and their hall, by D. Watney; The London that Sir Christopher Wren first knew, by the late C. H. Hopwood; Richard Cœur de Lion and the church of All Hallows, Barking, by P. Norman; Claypits and some streets of the City of London, by W. C. Edwards; Notes on a silver-mounted prayer book in Lincoln's Inn Library, by H. I. Whitaker; Roman London: Cornhill, Cheapside, by W. Martin and W. C. Edwards; Samuel Pepys and his birthplace, by W. H. Whitear; The Clerk's well, Clerkenwell, by A. Crow.

Norfolk Archaeology, vol. 22, part 1, contains the following papers:—Church plate in Norfolk; Deanery of Tunstead, by J. H. F. Walter; The Norwich case: particulars relating to the sufferings of Quakers in Norwich, 1682–1683, by A. J. Eddington; A Muster roll and Clergy list in the hundred of Holt, circa 1523, by B. Cozens-Hardy; More Norfolk palimpsest brasses, by H. O. Clark; A coat of arms in

St. Stephen's street, Norwich, by E. A. Kent; The sepulchral slab at Hickling church, by B. Cozens-Hardy; Five Compotus rolls of Blackbergh nunnery, by Rev. A. H. Cooke; Notes on the Blackfriars' Hall or Dutch church, Norwich, by E. A. Kent; Literature relating to Norfolk archaeology and kindred subjects, by G. A. Stephen. The number also contains the following short notes:—Niches recently discovered in St. Paul's church, Norwich; An ancient well at the Gladstone club, Norwich; An ancient fireplace at the Old Manor House, Walcot.

Archaeologia Aeliana, 3rd series, vol. 21, contains the following articles:—The manor and township of Titlington, by J. C. Hodgson; The merchant's company of Alnwick, by J. C. Hodgson; Seals of Northumberland and Durham, by C. H. Hunter Blair; Otterburn: the tower, hall, and dene, and the lordship or manor of Redesdale, by H. Pease; The masters of Horsley's school, Newcastle-upon-Tyne, by A. R. Laws; The baronies of Bolbec, by A. M. Oliver; Monumental inscriptions in Kirknewton church and churchyard, by J. C. Hodgson; Coventina's well, by J. Rendel Harris; British brooches of the Backworth type in the Black Gate Museum, Newcastle-upon-Tyne, by Parker Brewis; The Benwell altar dedicated to the God Antenociticus by the first cohort of the Vangiones, by G. R. B. Spain; Some Bingfield deeds, by H. H. E. Craster; The diary of Timothy Whittingham of Holmside, by J. C. Hodgson; The conventual buildings of Hexham priory, with a description of a recently discovered twin capital from the cloisters, by C. C. Hodges.

Transactions of the Thoroton Society, vol. 27, contains the following articles:—Henrietta, countess of Oxford (1694-1755), by R. W. Goulding; Staunton-in-the-Vale, by H. Gill; extracts from the Records of the Borough of Nottingham, by E. L. Guilford; The rectors of East Bridgford, by Rev. A. du Boulay Hill; The rood screen in Balderton church, by Rev. A. du Boulay Hill.

Sussex Archaeological Collections, vol. 65, contains the following articles:—Anne of Cleve's house, Southover, Lewes, by W. H. Godfrey; Sussex Domesday tenants: iv. The family of Chesney or Cheyney, by L. F. Salzman; Sutton rectory, by W. D. Peckham; Blackpatch Flint-mine excavation, 1922, by C. H. Goodman, Marian Frost, E. Curwen, and E. C. Curwen; Alfoldean Roman station: second report (on 1923), by S. E. Winbolt; 'The Marlipins,' New Shoreham, by A. B. Packham; Press-marks on the deeds of Lewes priory, by V. H. Galbraith; Ancient carving from Piltown, by J. E. Couchman; An Elizabethan builder's contract, by W. H. Godfrey; Pygmy and other flint implements found at Peacehaven, by J. B. Calkin; The 'Circus' in Park Brow, Sompting, by H. T. Pullen-Burry. Among the notes are the following:—The Park Brow platforms, by H. S. Toms; Hallstatt brooches in Sussex: The Manor of Radynden, by C. Thomas-Stanford; Lurgashall Clerk's fee, by D. Philipson-Stow; The Michells of Cuckfield, by Col. F. W. T. Attree; Wedbans, Wadhurst, by H. F. S. Ramsden; alabaster heraldic tablet found at Lewes.

The Brighton and Hove Archaeologist, no. 2 (1924), contains the following articles:—Plumpton Cross, Lewes, by F. Harrison; The

Hove tumulus, by Eliot Curwen and Eliot C. Curwen; Buckland Bank, by A. Hadrian Allcroft; The Brighton Steine and the Danes in Sussex, by W. Clarkson Wallis; Survey of the Celtic Road and Lynchets on Truleigh Hill, by R. P. R. Williamson; Valley entrenchments west of Ditchling road, by H. S. Toms; The tomb of Edward Elrington at Preston, by C. Thomas-Stanford; Surveys of Thundersbarrow camp and Thunder's steps, by R. Gurd, W. J. Jacobs, and H. S. Toms; Our Windmills, by W. Law.

Transactions of the Birmingham Archaeological Society, vol. 47, contains the following articles:—The Family of Muchgros, by F. T. S. Houghton; Monumental effigies in Warwickshire, by P. B. Chatwin. The volume also contains the following notes and shorter communications:—Iron wafer tongs found at Feckenham; Money of necessity, by T. G. Barnett; Brass at Hunningham church, Warwickshire, and a lead ingot found on the site of Kenilworth abbey, with the stamp of Henry VIII's commissioner, by P. B. Chatwin; Edgbaston old church; Sale of Besford Tithe barn and its removal to Hertfordshire. There are also reports of excursions to Coughton, Beoley, Bromsgrove, Grafton Manor, Purshall Hall, Aston Hall and church, Broadway, Buckland, and Stanton.

Transactions of the Worcestershire Archaeological Society, vol. 1, new series, contains the following articles:—Catalogue of papers in the Harrington church chest, by Rev. James Davenport; Some notes from Cathedral Records as to Barnabas Oley and the restoration of Worcester cathedral, 1660-66, by Canon James Wilson; 'John Inglesant', its author and Little Malvern, by Rev. H. M. M. Bartleet; William Lloyd, bishop of Worcester, by J. W. Willis-Bund; The earliest register of the parish of Bromsgrove, by E. A. B. Barnard; The Harewell triptych in Besford church, by Rev. J. Willis.

The Yorkshire Archaeological Journal, vol. 28, part 1, contains the following articles:—The east window of Holy Trinity Church, Goodramgate, York, by J. A. Knowles; The Roman camps at Cawthorn, near Pickering, by F. G. Simpson; Ancient heraldry in Yorkshire: Deaneries of Ryedale, Cleveland, and Richmond, by Rev. H. Lawrence and Rev. C. V. Collier; Knaresborough cave-chapels, by Abbot Cummins; Corker: an old Northumbrian family, by Major-General T. M. Corker; Roman lead-mining in Weardale, by E. Wooler; The parentage of William de Percy, by Rev. S. P. H. Statham. The number also contains obituary notices of W. Paley Baildon, Canon J. T. Fowler, and Dr. William Brown, and notes on Ulfkil cross and on Roman lamps found at Middleton St. George.

The Scottish Historical Review, October 1924, contains the following articles:—The Judicial Committees of the Scottish Parliament, 1369-70 to 1544, by Sir Philip J. Hamilton-Grierson; The cleansing of I-colum-cille, by J. R. N. Macphail; Some Papal bulls among the Hamilton papers, by Prof. R. K. Hannay, assisted by Jane Harvey and Marguerite Wood; The Norsemen in the Hebrides, by Canon MacLeod; Sixteenth-century schemes for the plantation of Ulster, by R. Dunlop; The earliest records of the Scottish tongue, by Prof. W. A. Craigie.

Transactions of the Glasgow Archaeological Society, new series,

vol. 7, part 3, contains the following articles:—The 'Breve Cronicle of the Erllis of Ross', by W. MacGill; Kilwinning abbey, by Dr. J. Edwards; Principal James Fall of Glasgow (1647–1711), by Rev. J. F. Leishman.

Journal of the County Kildare Archaeological Society, vol. 10, no. 2, contains the following articles:—An eighteenth century dwarf, Matthew Buckinger, by T. U. Sadleir; Ferns marriage licences, edited by H. C. Stanley-Torrey: The Chetwood letters.

Y Cymmrodor, vol. 34, consists of a paper entitled *Taliesin*: or the critic criticized, by Dr. J. Gwenogvryn Evans, in which the author replies to the criticism of Sir John Morris-Jones, published in vol. 28 of *Y Cymmrodor*, of his edition of *Taliesin* published in the series of Early Welsh Texts.

Transactions of the Carmarthenshire Antiquarian Society, part 44, contains the following articles:—Notes on the trial of John Beynon for killing Thomas Heslop in a duel, at Newcastle Emlyn, 1814; Abergwili vicars; Coroner's inquisitions, Carmarthenshire; An eighteenth-century pocket-book of the roads and great towns in England and Wales, by M. H. Jones; Daniel Higgs and Stephen Hughes; The origin of Cricket, by A. Hadrian Allcroft; Laugharne church: Palmers aisle, 1823; St. Hernin, by M. L. Dawson; The state sword of Carmarthen, by G. E. Evans; The Town bridge, Carmarthen, by G. E. Evans; Llanelly: Ballad singing, by G. E. Evans; Craig Derwyddon caves; Edward Tenison and Griffith Jones, 1722; The Llanwinio stone; Bronze Age urns found at Bwlchygroes, by G. E. Evans; Sir William Russell, Bart., of Broadway in Laugharne; Sir Walter Mansel of Muddlescombe, 2nd Baronet; Water mills in Carmarthenshire, by G. C. Watts; The Glanareth murder, 1770; Carmarthen: documents relating to the town from the earliest time to the close of the reign of Henry VIII; Rev. Griffith Jones, Llanddowror, by M. H. Jones; Roger Lort of Muddlescombe; Ieuan Brydydd Hir at Carmarthen, an unpublished letter, 1781, by G. E. Evans; St. Non's chapel, St. David's, Missing brass, by G. E. Evans.

Bulletin annuel de la Société Fersiaise, 1924, contains the following articles:—Report of the discovery of a neolithic ossuary at Blanchés Banques, St. Brelade, Jersey, by Captain J. Darrell Hill, with a report on the human remains, by Sir Arthur Keith; The occupation of Jersey by the Comte de Maulevrier: an inquiry held at Jersey in December 1463, by the captain of Mont Orgueil castle into the conspiracy of an Englishman called John Hareford (MS. 1340 in the Musée Condé at Chantilly), by R. R. Lemprière. The report of the archaeological section contains notes on the discovery of a bee-hive hut at La Sergenté, St. Brelade, by E. T. Nicolle, and on the preliminary excavation of Grosnez Hougue, by Major N. V. L. Rybot.

Proceedings of the American Philosophical Society, vol. 63, no. 1, contains the following articles of historical interest:—The authorship of the anonymous pamphlet published in London in 1760 entitled 'The interest of Great Britain considered with regard to her colonies and the acquisition of Canada and Guadaloupe', by I. Minis Hays; The amending provision of the Federal constitution in practice, by H. V. Ames.

Proceedings of the American Antiquarian Society, vol. 33, part 1, contains the following articles:—Lewis's account of the nomination of Jackson, by J. S. Bassett; The Thomas collection of American ballads, by W. C. Ford; Letters of Samuel Taggart, 1, by G. H. Haynes.

Proceedings of the Massachusetts Historical Society, vol. 57, contains the following articles:—Naval convoys, G. W. Allen; War letters 1861-4, by C. P. Bowditch; What led up to the Civil War and what was settled by Lincoln in that war, by H. S. Burrage; Benjamin Harris, printer and bookseller, by W. C. Ford; The first map of Pennsylvania, by W. C. Ford; Franklin's New England Courant, by W. C. Ford; Voting with beans and corn, by W. C. Ford; The Peninsula campaign of 1862, by T. G. Frothingham; Diary and letters of C. P. Huntington, 1831-4; Early Files of the County Court of Massachusetts, by N. Matthews; Col. John Stark at Winter Hill, 1775, by L. S. Mayo; The Coureurs de Bois, by W. B. Munro; The Garfield-Blaine tradition, by T. C. Smith; Why Jefferson abandoned the Presidential speech to Congress, by C. Warren; A letter of Levi Allen to William Pitt, 1789, by J. B. Wilbur.

Old Time New England, vol. 15, no. 2, contains the following amongst other articles:—Richard Mather (1596-1669), by K. B. Murdock; The slate gravestones of New England, by E. A. O'D. Taylor.

Académie Royale de Belgique: Bulletin de la classe des Beaux-Arts, vol. 6, nos. 4-9, contains:—communications on the surroundings and eventual isolation of ancient monuments, by P. Jaspar and M. Horta.

Académie Royale de Belgique: Bulletin de la classe des Lettres, vol. 10, nos. 4, 5-9, contains the following articles:—An economic history of the Great War, by H. Pirenne; The crisis of neutrality, by Baron A. Rolin; The political theories of the Middle Ages, by M. De Wulf; Paul Louis Courier and history, by P. Thomas; Mr. T. H. Reed's Government and Politics of Belgium, by M. Vauthier.

Bulletin de la Société des Antiquaires de France, 1923, nos. 3 and 4, contains the following papers:—Points of contact between the churches of Gaul and Illyria, by J. Zeiller; A Manuscript with the arms of Jean d'Orléans and Marguerite de Rohan in the Bibliothèque nationale, by M. Prinnet; Remains of a romanesque altar in the crypt of the church at Soubrebost, by A. Mayeux; The meaning of the word *gleba*, by F. Martroye; Representation of a Carthaginian house on a piece of gold from Carthage, by L. Poinssot; A thirteenth-century MS. illustrated with scenes from the lives of Christ, the Virgin, and the Saints, by A. Boinet; The inscription recently found at Djemila, by C. Bruston; The architects of the cathedral of Meaux, by F. Mély; A Frankish cemetery at Grenay, by Comte de Loigne; The supposed palimpsest of the Gospels from Tarragona, by Mgr. Battifol; The works of Anchises of Bologna in France, by H. Stein; View of Fontainebleau by Denis d'Utrecht, by L. Dimier; The *parabalani*, by F. Martroye; The bells of the cathedral of Bethlehem, by C. Enlart; An antique inscribed cameo, by P. Collinet; A picture ascribed to Mathieu Beaubrun, by L. Dimier; The Arras treasure, by J. Babelon; The *decani* or *lecticarii* and the *copiatae*, by F. Martroye; Picture of Catharine de Medici and her children at Castle Howard, by L. Dimier.

Mémoires de la Société nationale des Antiquaires de France, vol. 76, contains the following articles:—The tomb of Childeric and the origin of *cloisonné* jewellery, by E. Babelon; André and Germain Pilon, by G. Bapst; The juridical effect of the kiss in ancient French law, by E. Chénon; The cartulary of the priory of St. Catherine at Val-des-Écoliers, by E. Chénon; Parisian artists of the sixteenth and seventeenth centuries, by L. Dimier; St. Christopher with a dog's head, in Ireland and Russia, by H. Gaidoz; The will of St. Gregory Nazianzen, by F. Martroye; The career of three proconsuls of Africa in the time of Diocletian, by L. Poinssot.

Bulletin archéologique, 1923, part 1, contains the following articles:—Roman inscriptions in Fréjus museum, by R. Cagnat and E. Poupé; An iron sword of the La Tène period, found near Moval, by F. Scheurer and A. Lablotier; A hoard of Roman coins found at Tallant, by G. Jeanton; A head of Plotinus in Nîmes museum, by Commandant Espérandieu; The excavations at Alesia, by Commandant Espérandieu and Dr. Epery; *Pranuel*, an ancient building term, by Commandant Quenedey; Merovingian burials discovered at Brunoy and Tessancourt, by A. Lesort; The Roman roads from Lyons, by M. Besnier; The Roman road from Metz to Trèves, by Commandant Lalancé; Potteries discovered at Vertault, by H. Lorimy; Roman survivals in the buildings of Vaison, by Abbé Sautel; A Roman stone group found at Champagnat, by A. Blanchet; a tombstone and holy water stoup in Trets church, by Abbé Chaillan; The church of Théméricourt, by P. Coquelle; The monastery at Pentale, by L. Coutil; The colouring of Mithraic sculpture, by R. Forrer; The head of a lion in Mulhouse museum, by L. G. Werner; Prehistoric engravings recently found in the Dordogne, by Dr. Peyrony; Engravings recently observed on Megalithic structures near Carnac, by M. Le Rouzic; Pile-dwellings in Alsace, by L. G. Werner; A Neolithic station at Bazoches-les-Bray, by Mlle. Wever; Antiquities from Aleria, Corsica, by M. Ambrosi; The epitaph of Robert de Montfort at Balsi, Albania, by M. Besnier; Inscriptions from Tunis, by R. P. Delattre; Archaeological discoveries in Tunis, by L. Poinssot and R. Lantier; Archaeological discoveries in Algeria, by P. Monceau and A. Ballu; Roman milestones from Cherchel, by M. Albertini; Excavations at Cherchel, by M. Albertini; Inscriptions from Tunis, by L. Poinssot and R. Lantier; Inscriptions from Carthage, by R. P. Delattre; A tomb discovered in Morocco, by M. Gsell; Mural painting in Amiens in the Gallo-Roman period, by P. M. Saguez; Copper implements and Bronze Age deposits in Alsace, by L. G. Werner; Potters' marks from Carthage, by F. Icard; Ancient weights found at Carthage, by F. Icard; A statue of Julia Domna, by L. Poinssot and R. Lantier; Archaeological exploration of the country included on the 1/50,000 map of Maktar, by Captain Foussard.

Bulletin Monumental, vol. 83, nos. 1-2, contains the following articles:—The church of Saint Ours at Loches, by J. Valléry-Radot; The church at Attichy (Oise), by J. Béreux and A. Robert; The church at Meymac and the peculiarities of its plan, by R. Fage; the triforium of Bourges Cathedral, by P. des Chaumes; Aumbreys for reservation in East France and particularly in the Vosges, by A. Philippi; A new Burgundian sculpture in the Louvre, by M. Aubert; Cross-road

crosses and *ouradours* in Limousin, by M. Charageat; The *prannel* (balustrade) in the Pucelle tower at Rouen, by R. Quenedey; Saint-Leu stone, by E. Lefèvre-Pontalis; Excavations in the church at Souvigny (Allier), by F. Deshoulières; The Meaux Annunciation in the Louvre, by F. Deshoulières; The octagonal portico of the church of Eunat in Navarre, by E. Lambert; An unpublished drawing of the bell-tower of the church of St. Martial at Limoges, by A. Rostand.

Aréthuse, vol. 1, no. 5, contains the following articles:—The reliefs on a vase in the Baillehache collection in the Cabinet des Médailles, by M. Flot; Bibliography of the late Ernest Babelon; The issue of medals and counters in occupied Belgium during the war, by F. Mazerolle. The number also contains a short note on works of art in the Liège district and an obituary notice of Jacques de Morgan.

L'Anthropologie, tome xxxiv, nos. 3-4 (July 1924):—The most important article in this number is at the end (p. 346), where M. Salomon Reinach describes a new statuette of mammoth ivory from a Pleistocene deposit at Kostienki on the lower Don, about halfway between Moscow and Rostov on the sea of Azov. It is illustrated in three aspects and represents a woman in the Aurignac style, minus the head, arms, and feet. The discovery is held to invalidate the current theory that Quaternary art was of African origin. The Miocene flints from the Cantal are again under discussion, and M. Capitan's acceptance of them as human work (p. 287) only leads Prof. Boule to repeat his objections to the sites, though not to the principle of Tertiary man (p. 290). M. Patte insists that triangular hand-axes and the Levallois technique date from the first appearance of the reindeer in France, that is early in the period of Le Moustier (p. 309); and in connection with this place-name M. Boule agrees that the adjective Moustérien is preferable to Moustérien, the ordinary form in French. Flints of the period have now been found stratified in terrace-gravels of the last (Würm) glaciation in Venetia (p. 312), and several papers on the Palaeolithic period in Italy are reviewed. Here and elsewhere it is found that recent discoveries do not fit into the French scheme proposed by Gabriel de Mortillet (p. 315), and Africa is certainly a disturbing factor (p. 323). Attention is again called to the survival of Merck's rhinoceros (*leptorhinus*) well into the period of Le Moustier, long after the disappearance of its companions the straight-tusked elephant and hippopotamus, both characteristic of a warm climate (p. 323). There are suggestions as to the use and date of microliths (pygmy flints) found in Sicily (p. 317); the problem of re-chipped polished celts is touched on twice (pp. 313, 331); and, disguised by a misprint (p. 337), the Hengistbury Head pottery is compared with recent finds in Brittany and assigned to La Tène II or III.

Time xxxiv, no. 5 (Paris: September, 1924):—The articles are not archaeological, but Prof. Boule reviews three English publications (pp. 422-4): Mr. Lamplugh's presidential address to the Geological Society (*Q. J. G. S.*, lxxxvi, p. lxi) dealing with the mechanism of Drift in the light of recent observations in high latitudes; next, Mr. Reid Moir's discovery of flint implements in the Chalky Boulder clay of Suffolk (*Journ. R. Anthropol. Inst.*, l, 135) prompts him to suggest that this name is applied to deposits of various ages; and Mr. Trechmann's account

of pre-glacial clays and interglacial loess on the Durham coast asserts the existence of material that many geologists refuse to recognize in Britain (*Q.F.G.S.*, lxxv, 173). Dr. Hrdlicka maintains that the Piltdown skull and jaw do not belong together, a theory that minimizes the interest of both (p. 416); but perhaps enough importance is not attached to the discovery of a human skeleton of Le Moustier date at La Ferrassie, Dordogne, beneath a heavy cup-and-ring-marked stone (p. 415); and the same period is represented by deposits in a cave in Ariège, dating from the retreat of the Würm glaciers (p. 421). Prof. Boule repeats his opinion that the erosion of certain valleys was complete, even below the present channel, before the departure of the 'warm' fauna including *Elephas antiquus* and hippopotamus (p. 420). Discoveries of La Madeleine culture in Poland and the Ukraine are noticed on p. 427; and Dr. Forrer of Strasbourg gives the following sequence for Neolithic Alsatia: (1) a tall long-headed agricultural population who made stamped ware with white inlay and were buried in cemeteries; (2) people of medium height and cephalic index, bringing ribbon-ware from the Danube; (3) a repetition of (1); (4) a small race with medium cranial index, who made tulip-shaped pottery like that of the Swiss lake-dwellings, and were buried in their own huts; (5) aeneolithic, with corded and zoned beakers, the only skull known being short. Further afield, Rev. Neville Jones's discoveries of implements in the Taung and Tiger Kloof deposits at the Cape are noticed on p. 429 (*Four. R. Anthropol. Inst.*, 1, 412); and a representative series has been presented to the British Museum.

Revue Mabillon, 2nd series, no. 16, contains the following articles:—The abbey of Saint-Salvy at Albi from the sixth to the twelfth century, by Canon L. de Lager; The abbey of Mazan from 1123 to 1150, by J. Regné; Clairvaux charters and bulls, by Canon A. Prévost; The ancestry of St. William of Dijon, by J. Depoin; Monastic sources preserved in the archives of the Doubs, by A. Dornier.

Hespéris, vol. 4, part 1, contains the following articles:—René Basset, 1855–1924, by E. Lévi-Provençal; Almohad sanctuaries and fortresses: i. Tinnel, by H. Basset and H. Terrasse; A new Arab inscription from Tangier, by G. S. Colin; Customs and legends of the Berber coast of Morocco, by R. Montagne; Moroccan sabres in the Dar Batha Museum at Fez, by P. de Vigy.

Mémoires de la Société des Lettres, Sciences, et Arts de Bar-le-Duc, vol. 44, contains the following articles:—The necrologies of the abbey of Saint-Mihiel, by Canon C. Aimond; The Moyen family of Lescamoussier, by L. Bossu; Général Hubert Casimir Rousseau de la Férandière (1728–1798), by Lt.-Col. M. Chavanne; René de Chalon and the skeleton designed by Richier for the burial of René's heart, by L. Braye.

Bulletin de la Société scientifique, historique, et archéologique de la Corrèze, vol. 46, part 2, contains the following articles:—Colonel Antoine Lagorsse (1770–1842), by L. de Nussac; The priory of Chasteaux-Cousages, by Dr. R. Laffon; Prehistoric sites at Planche-torte, by Abbé L. Bardou, A. and J. Bouyssonie; Pre-Columbian Indian caves in the south-east of the United States, by A. E. B. Renaud; The hospital at Brive, by J. Lalande.

Bulletin de la Société des Antiquaires de la Morinie, vol. 14, June-March, 1924, contains a paper by Dom A. Wilmart on the Library of Abbot Odbert, 34th abbot of St. Bertin.

Bulletin de la Société des Antiquaires de Picardie, 1923, no. 4, contains the following articles:—A bust of the Marquise de Mailly, by P. Ansart; Excavations in the castle of Picquigny, by E. Bienaimé; The blessed candle: a loss from the war to be restored with difficulty, by H. Josse; The Benedictine abbey of St. Vast de Moreuil, by the Abbé Olive; The history of 'La Hautoye' at Amiens, by F. Lamy; An episode in the life of St. Geoffroy, bishop of Amiens, by C. Florisoone.

Bonner Jahrbücher, vol. 128, contains the following articles:—Ionic architecture in Asia Minor and the building of the Mausoleum of Halicarnassus, by Dr. Krischen; Roman surveys of assessable land, by A. Oxé; An Arretine potsherd in the Museum at Alexandria, by F. W. v. Bissing; A Gallo-Roman chariot from Frenz on the Inde in the Düren district, by H. Lehner; An 'Egyptian' statuette from the camp at Bonn, by A. Wiedemann; Portraits of Octavia, by F. Winter; Gallo-Roman streets and smaller buildings, by F. Oelmann. The number also contains summaries of the following papers:—Romano-German cultural connexions, with special reference to the Rhineland, by H. Aubin; Roman monuments in the Dobrutscha, by F. Drexel; Geological investigation of the right bank of the Rhine opposite Bonn, by Dr. Jungbluth; Prehistoric and later occupation of the right bank of the Rhine opposite Bonn, by H. Lehner; History of the right bank of the Rhine opposite Bonn, by Dr. Levison; The Argonaut Saga in the history of Religion, by C. Clemen; Landlords and peasants in Roman Rhineland, by E. Sadée.


Notizie degli Scavi di Antichità, vol. 21, parts 4, 5, 6, contains the following articles:—Researches in Isole del Quarnero, by C. Marchesetti; Important Roman finds at Feltre, by T. Campanile; The discovery at Castiglione of various antiquities contained in an altar referable to the cult of Robigus, by E. Galli; Recent excavations in the town and cemeteries at Vignanello, by G. Q. Giglioli.

Rendiconti della R. Accademia nazionale dei Lincei, ser. 5, vol. 33, parts 1-3, contains the following articles:—The coins of L. Mussidius Longus and their significance for the history of the Roman triumvirate, by E. Pais; Fourth-century impressions of the wonders of Rome, by G. Lumbroso; The Fables of Phaedrus, by N. Festa; A new representation of the torch race on an Attic oenochoe found at Bengasi and now in the Louvre, by G. Q. Giglioli.

Atti e Memorie della Società Tiburtina, vol. 4, nos. 1-2, contains the following articles:—The via Tiburtina (continued), by T. Ashby; Primitive man in the territory of Montecelio, by C. Piccolini; Marcelina in a document of 1229 and two bulls of the 14th/15th century, by G. Presutti; A new list of bishops of Tivoli (continued), by G. Cascioli; The Dominicans in Tivoli, by A. Sesta; A biographical note on Cardinal Alessandro d'Este, governor of Tivoli, by I. Pinelli. Amongst the notes are the following: St. Thomas Aquinas at Tivoli; The convent of St. Cosimale in Vicovaro and the discovery of wall-paintings; Prehistoric discoveries at Montecelio; Tombs and pavements

found at Montecelio; Statues found at Bagni and Marcellina; An affray at the procession of the Salutation in 1725; Coats of arms and banners of the streets of Tivoli.

Stenalterstudien, av Anathon Bjørn (*Videnskapsselskapets Skrifter II Hist.-filos. Klasse*, 1924, no. 5: Kristiania). In the first of three papers the author examines the evidence afresh for Solutré blades in Scandinavia, and sums up against the views expressed by the late Professor Montelius in *Antiq. Journ.*, i, 98 and elsewhere. These amygdaloid (*mandel-formede*) flints are now considered as unfinished blades of the passage-grave period, or as raw material imported in this form from the flint-producing areas. In the second paper it is maintained that in eastern Norway the celt with pointed butt and pointed oval section is not so characteristic as elsewhere of the opening (pre-dolmen) phase of the later Neolithic. The type first appears and first goes out of use in Jutland, and though far less plentiful, had probably a longer life in Norway. Recent discoveries show that the dwelling-site (*boplads*) culture of nomadic hunters and fishermen in that region extended well into the later Stone Age (after the Shell-mounds), and was not extinct in the days of the thin-butted celt, of agriculture, and the dolmen. It is now clear that the Megalithic monuments were not the only graves of the period; and thin-butted celts are found not only in burials apart from dolmens, but also in peat-bogs, where they must be votive offerings. These celts were certainly imported, perhaps by the people who introduced Megalithic building. The concluding paper, based on observations in the north of Norway, favours a prolongation of the slate or Arctic industry into the Bronze Age. The largest slate implements seem to be the latest, and flint models are known for most of the types; but a few others may be derived from bronze originals, as they would not be practicable in flint, and some of the larger slate daggers seem to be copied from bronze blades in bone handles. Finds in caves and rock-shelters north of Trondhjem even suggest that the slate industry lasted till the local introduction of iron.

Annales du Service des Antiquités de l'Égypte, vol. 23, contains the following articles:—Sarcophagi of the Middle Empire from Assiout, by H. Gauthier and G. Lefebvre; Some demotic papyri from Assiout, by H. Sottas; The rising of the Nile in the twenty-ninth year of Amasis, by G. Daressy; The bilingual stone from Menouf, by G. Daressy; Coptic steles from the Fayoum, by H. Munier; A mosaic found at Athribis, by M. Pillet; The divine egg of Hermopolis, by G. Lefebvre; Across Lower Egypt, by H. Gauthier; Selected papyri from the archives of Zenon, by C. C. Edgar; Report on the work at Karnak (1922-3), by M. Pillet; The Greek graffiti discovered at Karnak by M. Pillet, by N. A. Giron; The *naos* of Senouset I, by M. Pillet; Note on the word , by H. Gauthier and G. Lefebvre; A monument of Senusret I, by R. Engelbach; Small obelisk of Amenophis II from Asswan, by R. Engelbach; Two steles of the late Middle Kingdom from Tell Edfu, by R. Engelbach; Notes on Coptic literature, by H. Munier; A sarcophagus lid from Tounah, by G. Lefebvre.

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